

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 10:25:21 ON 22 DEC 2004

FILE 'REGISTRY' ENTERED AT 10:25:27 ON 22 DEC 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9
DICTIONARY FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

```
=> s rp() 8() monobutyryl() camps
      1229 RP
      2375391 8
      18 MONOBUTYRYL
      1 CAMPS
L1      0 RP (W) 8 (W) MONOBUTYRYL (W) CAMPS
```

=> s 8()monobutyryl()camps
2375391 8
18 MONOBUTYRYL
1 CAMPS
L2 0 8 (W) MONOBUTYRYL (W) CAMPS

=> s monobutyryl()camps
18 MONOBUTYRYL
1 CAMPS
13 0 MONOBUTYRYL (W) CAMPS

```
=> s rp()8()monobutyryl()cyclic()adenosine()monophosphorothioate  
      1229 RP  
      2375391 8  
          18 MONOBUTYRYL  
          88903 CYCLIC
```

```

64388 ADENOSINE
  4 MONOPHOSPHOROTHIOATE
L4      0 RP (W) 8 (W) MONOBUTYRYL (W) CYCLIC (W) ADENOSINE (W) MONOPHOSPHOROTHIOATE

=> s monobutyryl()cyclic()adenosine()monophosphorothioate
     18 MONOBUTYRYL
     88903 CYCLIC
     64388 ADENOSINE
       4 MONOPHOSPHOROTHIOATE
L5      0 MONOBUTYRYL (W) CYCLIC (W) ADENOSINE (W) MONOPHOSPHOROTHIOATE

=> s monobutyryl()cyclic()adenosine()monophosphate
     18 MONOBUTYRYL
     88903 CYCLIC
     64388 ADENOSINE
       1513 MONOPHOSPHATE
L6      0 MONOBUTYRYL (W) CYCLIC (W) ADENOSINE (W) MONOPHOSPHATE

=> s monobutyryl()camp
     18 MONOBUTYRYL
     13638 CAMP
L7      2 MONOBUTYRYL (W) CAMP

```

```

=> d 17 ibib
'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

```

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

| | |
|--------|---|
| REG | - RN |
| SAM | - Index Name, MF, and structure - no RN |
| FIDE | - All substance data, except sequence data |
| IDE | - FIDE, but only 50 names |
| SQIDE | - IDE, plus sequence data |
| SQIDE3 | - Same as SQIDE, but 3-letter amino acid codes are used |
| SQD | - Protein sequence data, includes RN |
| SQD3 | - Same as SQD, but 3-letter amino acid codes are used |
| SQN | - Protein sequence name information, includes RN |
| CALC | - Table of calculated properties |
| EPROP | - Table of experimental properties |
| PROP | - EPROP and CALC |

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

| | |
|------|--|
| ABS | -- Abstract |
| APPS | -- Application and Priority Information |
| BIB | -- CA Accession Number, plus Bibliographic Data |
| CAN | -- CA Accession Number |
| CBIB | -- CA Accession Number, plus Bibliographic Data (compressed) |
| IND | -- Index Data |
| IPC | -- International Patent Classification |
| PATS | -- PI, SO |
| STD | -- BIB, IPC, and NCL |
| IABS | -- ABS, indented, with text labels |
| IBIB | -- BIB, indented, with text labels |
| ISTD | -- STD format, indented |
| OBIB | ----- AN, plus Bibliographic Data (original) |

OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations

SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.

HELP FORMATS -- To see detailed descriptions of the predefined formats.

ENTER DISPLAY FORMAT (IDE):ide

L7 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN

RN 15392-98-0 REGISTRY

CN Adenosine, cyclic 3',5'-(hydrogen phosphate) 2'-butanoate (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

CN Adenosine cyclic 3',5'-phosphate, 2'-butyrate (7CI)

CN Adenosine, cyclic 3',5'-(hydrogen phosphate) 2'-butyrate (8CI)

CN Butyric acid, 2'-ester with adenosine cyclic 3',5'-(hydrogen phosphate) (8CI)

OTHER NAMES:

CN 2'-O-Butyryladenosine 3',5'-cyclic phosphate

CN 2'-O-Monobutyryl 3',5'-adenosine monophosphate

CN 2'-O-Monobutyryl-cAMP

CN 2'-O-Monobutyryl-cyclic AMP

CN 2'-O-Monobutyryladenosine 3',5'-cyclic monophosphate

CN O2'-Butyryl cyclic-AMP

CN O2'-Monobutyryl cyclic AMP

CN O2'-Monobutyryladenosine 3',5'-cyclic monophosphate

FS STEREOSEARCH

DR 43150-63-6

MF C14 H18 N5 O7 P

CI COM

LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

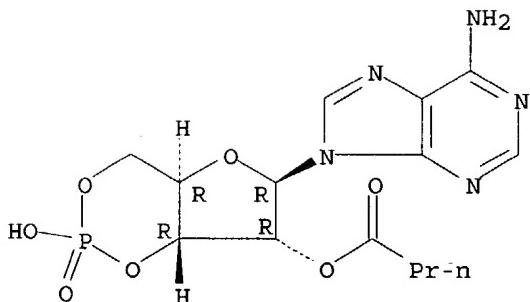
DT.CA CAplus document type: Conference; Journal; Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.



61 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

61 REFERENCES IN FILE CAPLUS (1907 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d ide 2

L7 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN

RN 13117-60-7 REGISTRY

CN Adenosine, N-(1-oxobutyl)-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

CN Butyramide, N-(9-β-D-ribofuranosyl-9H-purin-6-yl)-, cyclic hydrogen phosphate (8CI)

OTHER NAMES:

CN Cyclic N6-monobutyryl adenosine-3',5'-monophosphate

CN Monobutyryl adenosine cyclic 3',5'-monophosphate

CN N6-Butyryl cyclic AMP

CN N6-Butyryl-3',5'-cyclic AMP

CN N6-Butyryl-cAMP

CN N6-Butyryladenosine 3',5'-cyclic phosphate

CN N6-Monobutyryl 3',5'-cyclic AMP

CN N6-Monobutyryl cyclic AMP

CN **N6-Monobutyryl-cAMP**

CN N6-Monobutyryladenosine 3',5'-cyclic monophosphate

CN N6-Monobutyryladenosine-3',5'-cyclic monophosphoric acid

FS STEREORESEARCH

DR 29117-37-1, 32266-36-7

MF C14 H18 N5 O7 P

CI COM

LC STN Files: AGRICOLA, BEILSTEIN*, CA, CANCERLIT, CAPLUS, CASREACT, DDFU, DRUGU, MEDLINE, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

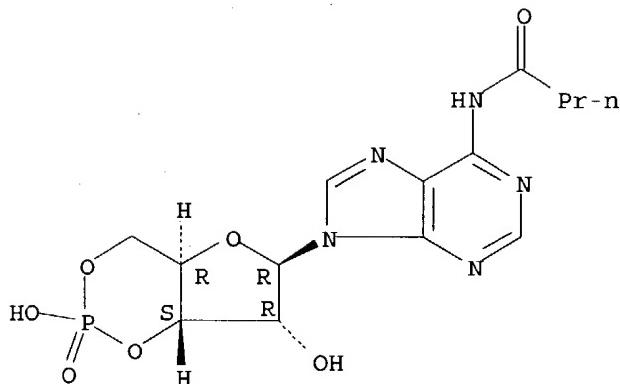
DT.CA CAplus document type: Conference; Journal; Patent

RL.P Roles from patents: BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.



257 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 257 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> s monobutyryl()camp?
 18 MONOBUTYRYL
 16709 CAMP?
 L8 2 MONOBUTYRYL(W) CAMP?

=> s Monobutyryladenosine 3',5'-cyclic mono?
 2 MONOBUTYRYLADENOSINE
 635336 3',5'
 88903 CYCLIC
 728199 MONO?
 L9 0 MONOBUTYRYLADENOSINE 3',5'-CYCLIC MONO?
 (MONOBUTYRYLADENOSINE (W) 3',5' (W) CYCLIC (W) MONO?)

=> s Monobutyryladenosine 3',5'-cyclic mono#
 2 MONOBUTYRYLADENOSINE
 635336 3',5'
 88903 CYCLIC
 728194 MONO#
 L10 0 MONOBUTYRYLADENOSINE 3',5'-CYCLIC MONO#
 (MONOBUTYRYLADENOSINE (W) 3',5' (W) CYCLIC (W) MONO#)

=> s Monobutyryladenosine 3',5'-cyclic
 2 MONOBUTYRYLADENOSINE
 635336 3',5'
 88903 CYCLIC
 L11 0 MONOBUTYRYLADENOSINE 3',5'-CYCLIC
 (MONOBUTYRYLADENOSINE (W) 3',5' (W) CYCLIC)

=> s chlorophenyl(5n)thio(5n)cyclic
 1122743 CHLOROPHENYL
 2118603 THIO
 88903 CYCLIC
 L12 111 CHLOROPHENYL(5A)THIO(5A)CYCLIC

=> s chlorophenyl(5n)thio(5n)cyclic and adenosine
 1122743 CHLOROPHENYL
 2118603 THIO
 88903 CYCLIC
 111 CHLOROPHENYL(5A)THIO(5A)CYCLIC
 64388 ADENOSINE
 L13 54 CHLOROPHENYL(5A)THIO(5A)CYCLIC AND ADENOSINE

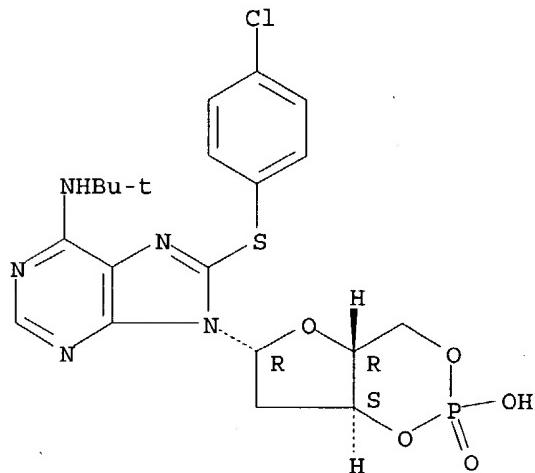
=> dup rem 113

DUPPLICATE IS NOT AVAILABLE IN 'REGISTRY'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L13
L14 54 DUP REM L13 (0 DUPLICATES REMOVED)

=> d l14 tot

L14 ANSWER 1 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634208-50-7 REGISTRY
CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-N-(1,1-dimethylethyl)-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H23 Cl N5 O5 P S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

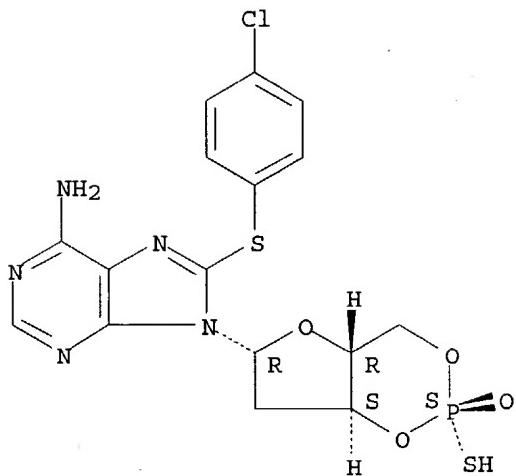
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 2 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634208-45-0 REGISTRY
CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-(hydrogen (S)-phosphorothioate) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H15 Cl N5 O4 P S2
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 3 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 634208-43-8 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-(hydrogen (R)-phosphorothioate) (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C16 H15 Cl N5 O4 P S2

CI COM

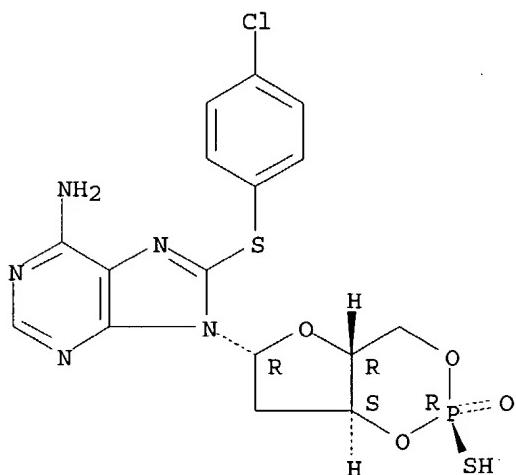
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 4 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 634208-38-1 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic

3',5'-[hydrogen (R)-phosphorothioate] (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C17 H17 Cl N5 O5 P S2

CI COM

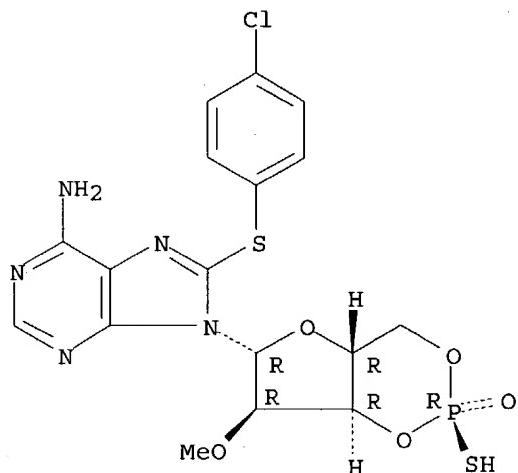
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 5 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 634208-37-0 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic
3',5'-[hydrogen (S)-phosphorothioate] (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C17 H17 Cl N5 O5 P S2

CI COM

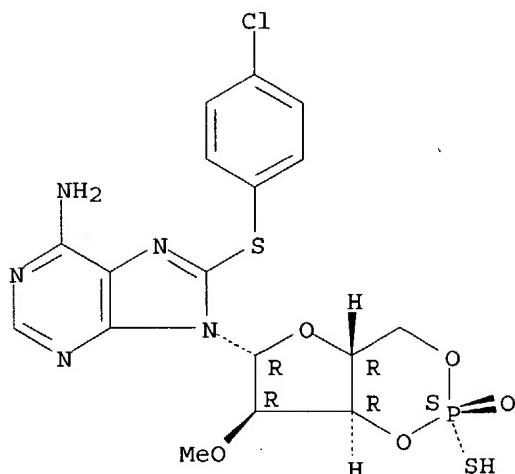
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 6 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 634208-28-9 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) 2'-(dimethylcarbamate) (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C19 H20 Cl N6 O7 P S

CI COM

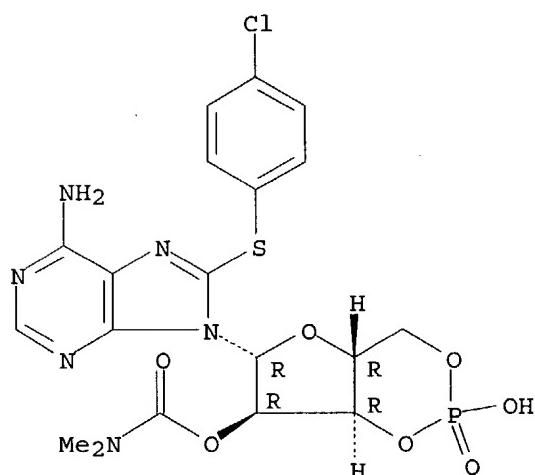
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA CAPLUS document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 7 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 634208-26-7 REGISTRY

CN Adenosine, 8-[(2,4-dichlorophenyl)thio]-2'-O-methyl-, cyclic

3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C17 H16 Cl2 N5 O6 P S

CI COM

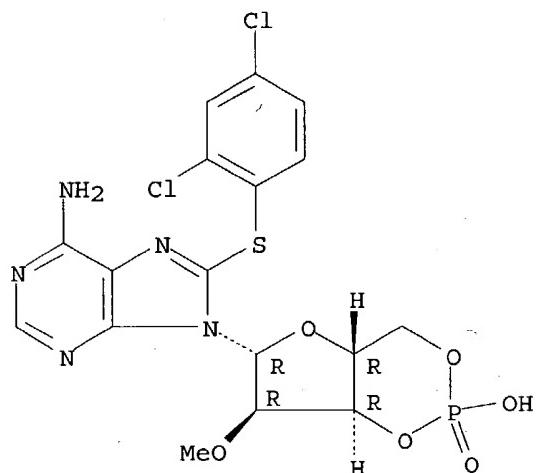
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 8 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 634208-02-9 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-(hydrogen (S)-phosphorothioate), monosodium salt (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C16 H15 Cl N5 O4 P S2 . Na

SR CA

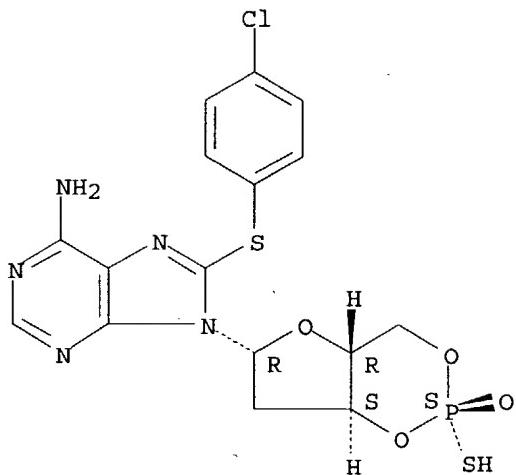
LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

CRN (634208-45-0)

Absolute stereochemistry.

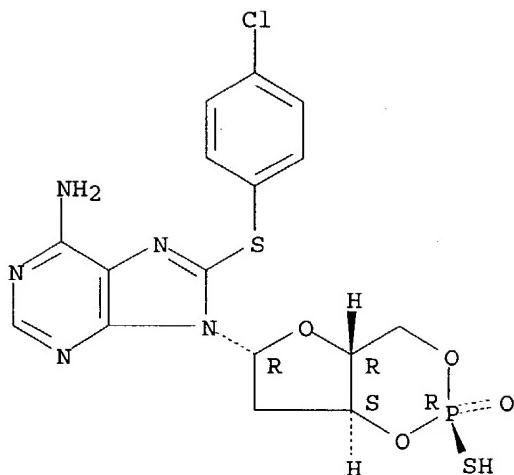


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 9 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 634208-01-8 REGISTRY
 CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-[hydrogen (R)-phosphorothioate], monosodium salt (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C16 H15 Cl N5 O4 P S2 . Na
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER
 DT.CA CAplus document type: Patent
 RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
 CRN (634208-43-8)

Absolute stereochemistry.



● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 10 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634207-96-8 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) 2'-(dimethylcarbamate), monosodium salt (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C19 H20 Cl N6 O7 P S . Na

SR CA

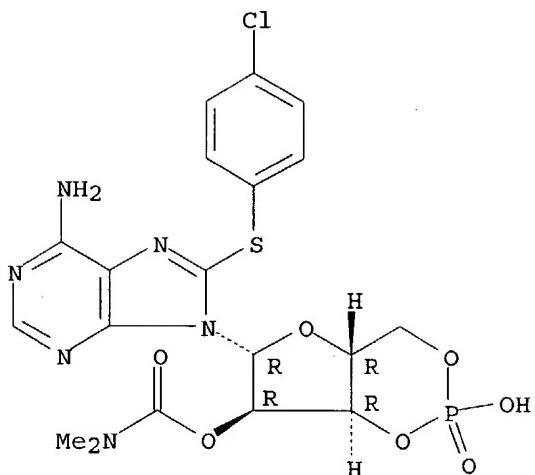
LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA Caplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

CRN (634208-28-9)

Absolute stereochemistry.

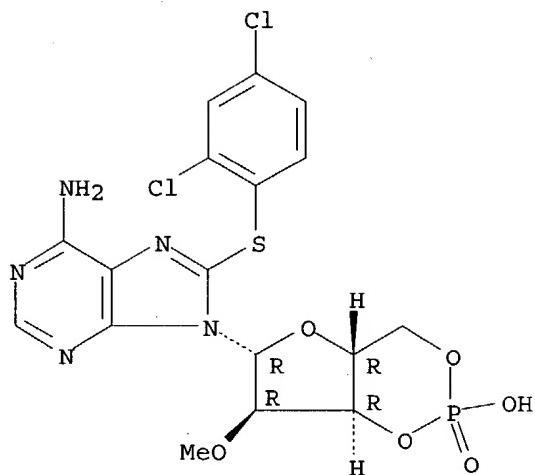


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 11 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 634207-95-7 REGISTRY
 CN Adenosine, 8-[(2,4-dichlorophenyl)thio]-2'-O-methyl-, cyclic
 3',5'-(hydrogen phosphate), monosodium salt (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C17 H16 Cl2 N5 O6 P S . Na
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER
 DT.CA Caplus document type: Patent
 RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES
 (Uses)
 CRN (634208-26-7)

Absolute stereochemistry.



● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 12 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 634207-71-9 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-N-phenyl-, cyclic
 3',5'-(hydrogen phosphate), monosodium salt (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C22 H19 Cl N5 O5 P S . Na

SR CA

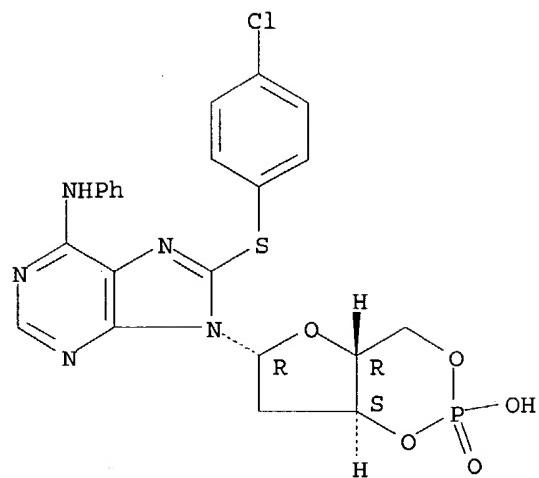
LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES
 (Uses)

CRN (612513-12-9)

Absolute stereochemistry.

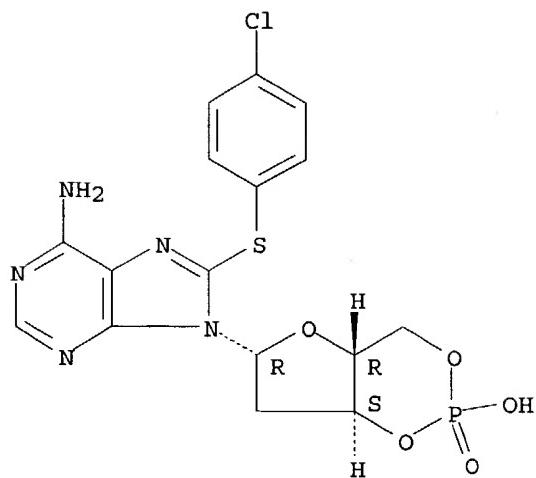


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 13 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 634207-70-8 REGISTRY
 CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-(hydrogen phosphate), monosodium salt (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C16 H15 Cl N5 O5 P S . Na
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER
 DT.CA Cplus document type: Patent
 RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
 CRN (137756-34-4)

Absolute stereochemistry.

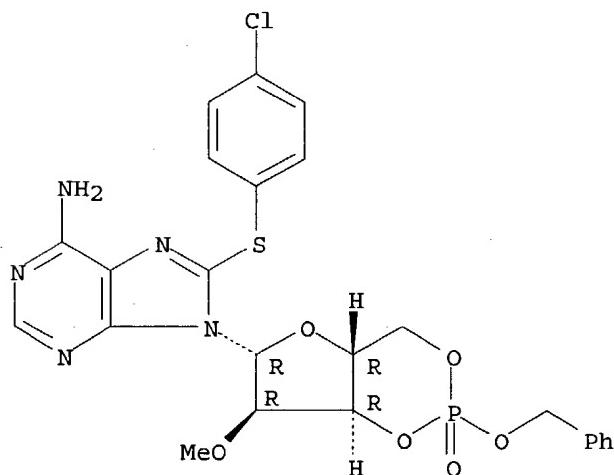


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 14 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 634207-68-4 REGISTRY
 CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic
 3',5'-(phenylmethyl phosphate) (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C24 H23 Cl N5 O6 P S
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER
 DT.CA CAPplus document type: Patent
 RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES
 (Uses)

Absolute stereochemistry.

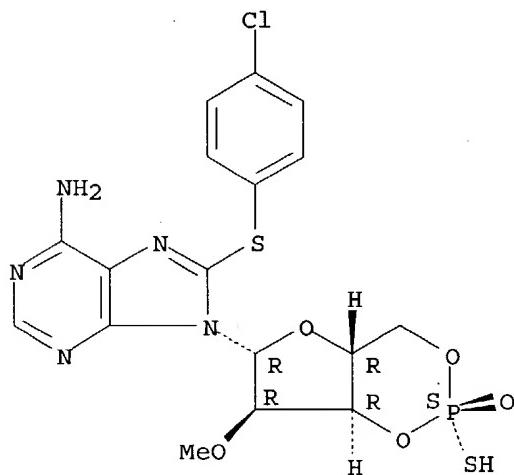


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 15 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634207-63-9 REGISTRY
CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic
3',5'-(hydrogen (S)-phosphorothioate), monosodium salt (9CI) (CA
INDEX NAME)
FS STEREOSEARCH
MF C17 H17 Cl N5 O5 P S2 . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA Caplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES
(Uses)
CRN (634208-37-0)

Absolute stereochemistry.

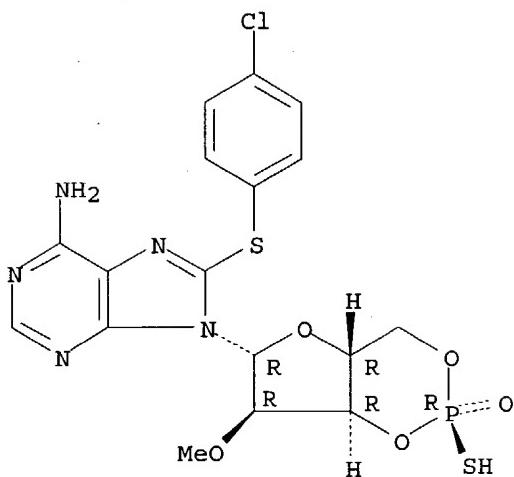


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 16 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634207-62-8 REGISTRY
CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic
3',5'-(hydrogen (R)-phosphorothioate), monosodium salt (9CI) (CA
INDEX NAME)
FS STEREOSEARCH
MF C17 H17 Cl N5 O5 P S2 . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA Caplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES
(Uses)
CRN (634208-38-1)

Absolute stereochemistry.



● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 17 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 634207-53-7 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic
 3',5'-(hydrogen phosphate), monosodium salt (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C17 H17 Cl N5 O6 P S . Na

SR CA

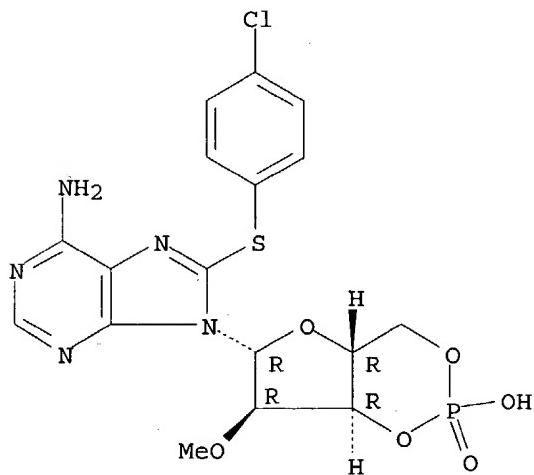
LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT
 (Reactant or reagent); USES (Uses)

CRN (510774-50-2)

Absolute stereochemistry.

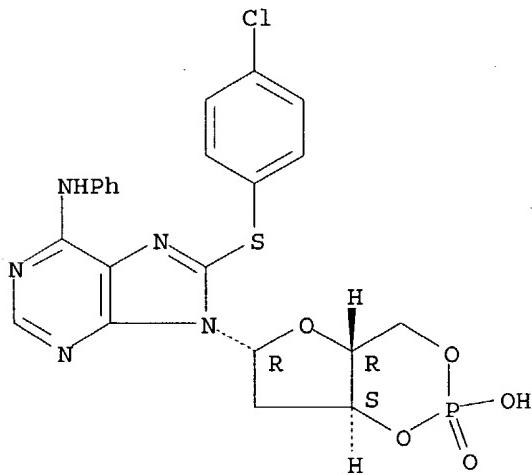


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 18 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 612513-12-9 REGISTRY
CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-N-phenyl-, cyclic
3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H19 Cl N5 O5 P S
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES
(Uses)
RL.NP Roles from non-patents: BIOL (Biological study)

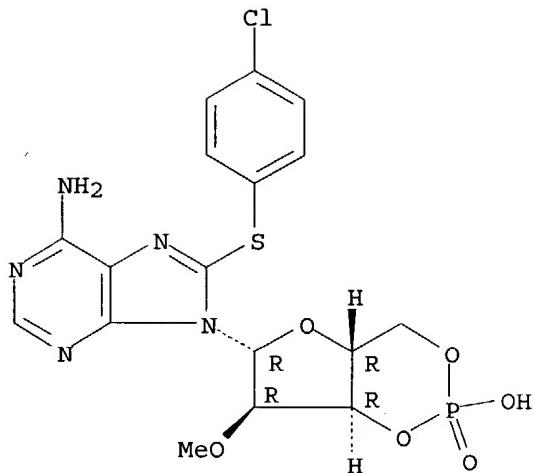
Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 19 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 510774-50-2 REGISTRY
CN Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic
3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H17 Cl N5 O6 P S
CI COM
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER
DT.CA Caplus document type: Conference; Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES
(Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation);
PRP (Properties); USES (Uses)

Absolute stereochemistry.



7 REFERENCES IN FILE CA (1907 TO DATE)

7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 20 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 370091-73-9 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[[5,7-bis(carboxymethoxy)-2-oxo-2H-1-benzopyran-4-yl]methyl (R)-phosphate] (9CI) (CA INDEX NAME)

FS STEREOSEARCH

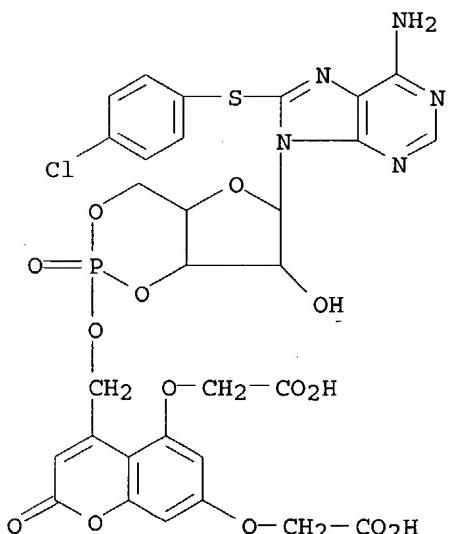
MF C30 H25 Cl N5 O14 P S

SR CA

LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)



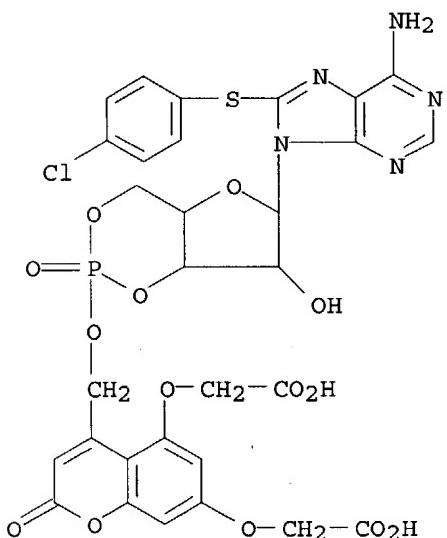
1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 21 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 370091-71-7 REGISTRY

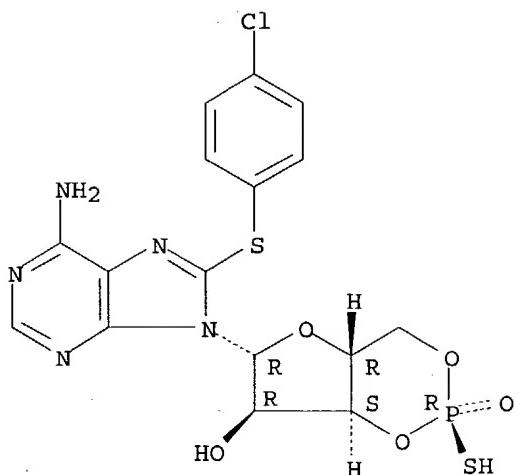
CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[[5,7-bis(carboxymethoxy)-2-oxo-2H-1-benzopyran-4-yl]methyl (S)-phosphate] (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C30 H25 Cl N5 O14 P S
 SR CA
 LC STN Files: CA, CAPLUS
 DT.CA Caplus document type: Patent
 RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 22 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 221905-35-7 REGISTRY
 CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen (R)-phosphorothioate], monosodium salt (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C16 H15 Cl N5 O5 P S2 . Na
 SR CAS Client Services
 CRN (129735-01-9)

Absolute stereochemistry.



● Na

L14 ANSWER 23 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 190522-25-9 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[{(S)-
(acetoxy)methyl phosphate]} (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C19 H19 Cl N5 O8 P S

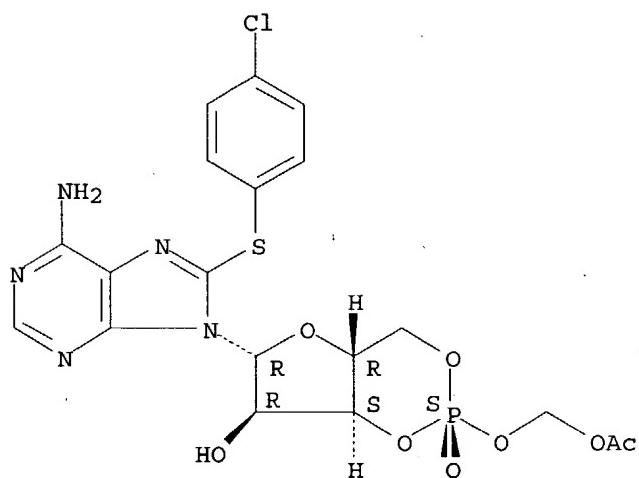
SR CA

LC STN Files: CA, CAPLUS

DT.CA CAPLUS document type: Journal

RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

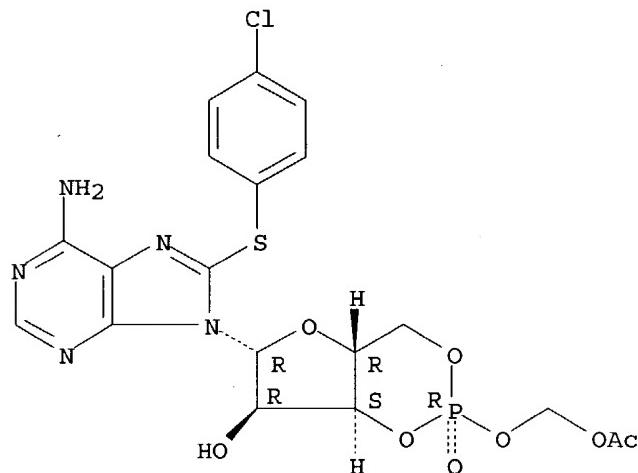
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 24 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 190522-21-5 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(acetyloxy)methyl (R)-phosphate (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H19 Cl N5 O8 P S
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

Absolute stereochemistry.

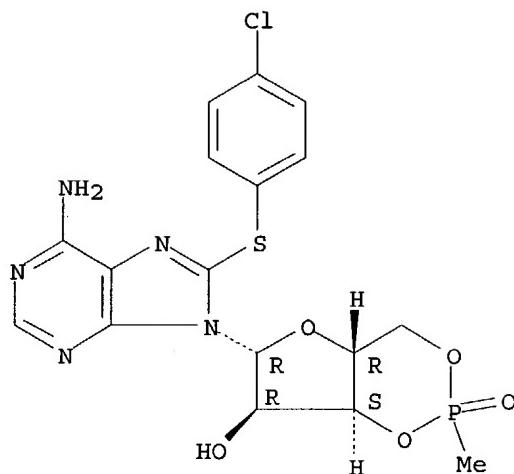


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 25 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 173367-03-8 REGISTRY
CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(methylphosphonate) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H17 Cl N5 O5 P S
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 26 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 152322-59-3 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphorothioate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C16 H15 Cl N5 O5 P S2

SR CA

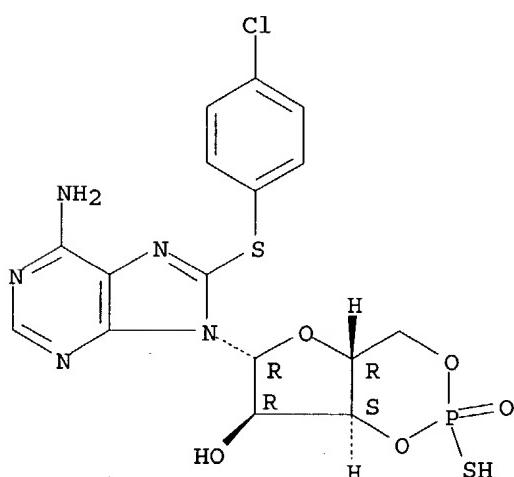
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT.CA CApplus document type: Journal; Patent

RL.P Roles from patents: BIOL (Biological study)

RL.NP Roles from non-patents: BIOL (Biological study)

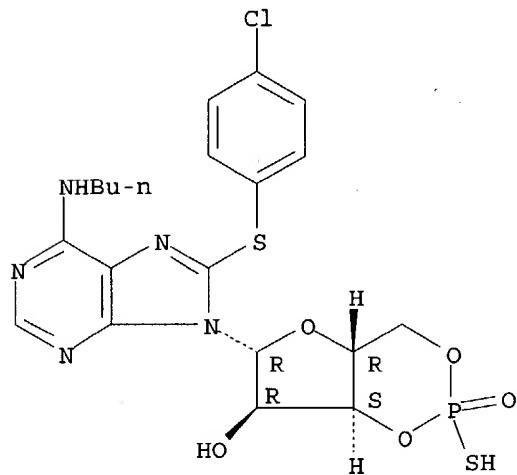
Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 27 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 152218-14-9 REGISTRY
 CN Adenosine, N-butyl-8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphorothioate) (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
 FS STEREOSEARCH
 MF C20 H23 Cl N5 O5 P S2
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
 DT.CA CAplus document type: Patent
 RL.P Roles from patents: BIOL (Biological study)

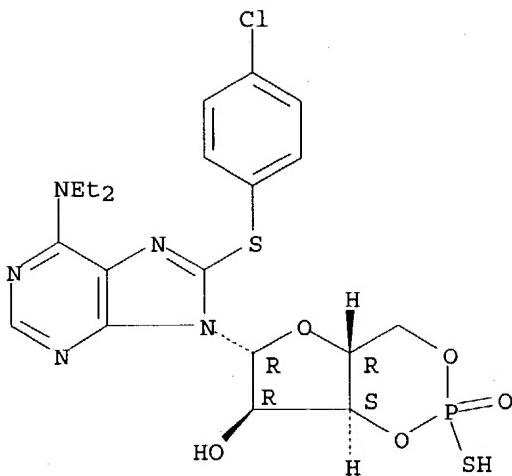
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 28 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 152218-11-6 REGISTRY
 CN Adenosine, 8-[(4-chlorophenyl)thio]-N,N-diethyl-, cyclic 3',5'-(hydrogen phosphorothioate) (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
 FS STEREOSEARCH
 MF C20 H23 Cl N5 O5 P S2
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
 DT.CA CAplus document type: Patent
 RL.P Roles from patents: BIOL (Biological study)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 29 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 152218-10-5 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-N-phenyl-, cyclic 3',5'-(hydrogen phosphorothioate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C22 H19 Cl N5 O5 P S2

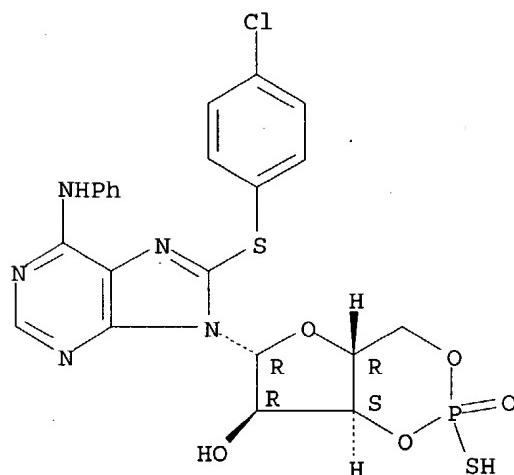
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT.CA CAPplus document type: Patent

RL.P Roles from patents: BIOL (Biological study)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

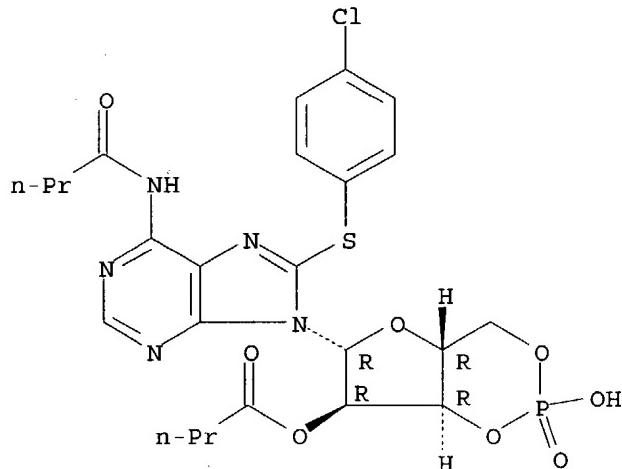
L14 ANSWER 30 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 143329-37-7 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-N-(1-oxobutyl)-, cyclic

3',5'-(hydrogen phosphate) 2'-butanoate (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
 FS STEREOSEARCH
 MF C24 H27 Cl N5 O8 P S
 SR CA
 LC STN Files: CA, CAPLUS
 DT.CA CAplus document type: Journal
 RL.NP Roles from non-patents: BIOL (Biological study)

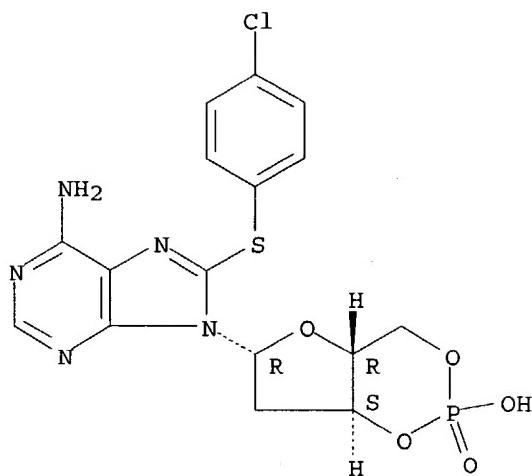
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 31 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 137756-34-4 REGISTRY
 CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)**
 OTHER CA INDEX NAMES:
 CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
 FS STEREOSEARCH
 MF C16 H15 Cl N5 O5 P S
 CI COM
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER
 DT.CA CAplus document type: Journal; Patent
 RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
 RL.NP Roles from non-patents: BIOL (Biological study)

Absolute stereochemistry.



4 REFERENCES IN FILE CA (1907 TO DATE)
 4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 32 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 129735-01-9 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen (R)-phosphorothioate] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen phosphorothioate], (R)-

FS STEREOSEARCH

MF C16 H15 Cl N5 O5 P S2

CI COM

SR CA

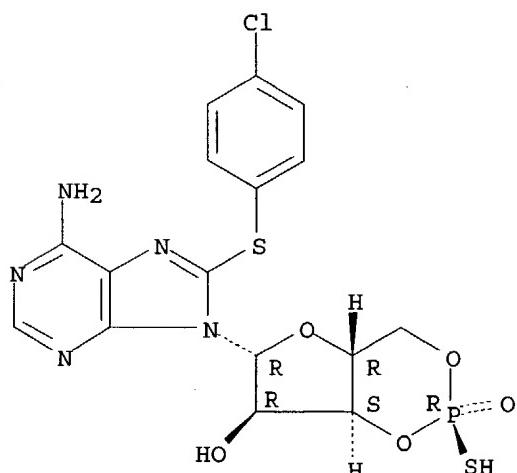
LC STN Files: CA, CAPLUS, CHEMCATS, CSCHEM, TOXCENTER

DT.CA CAPplus document type: Journal; Patent

RL.P Roles from patents: BIOL (Biological study); PROC (Process); USES (Uses)

RL.NP Roles from non-patents: BIOL (Biological study); USES (Uses)

Absolute stereochemistry.

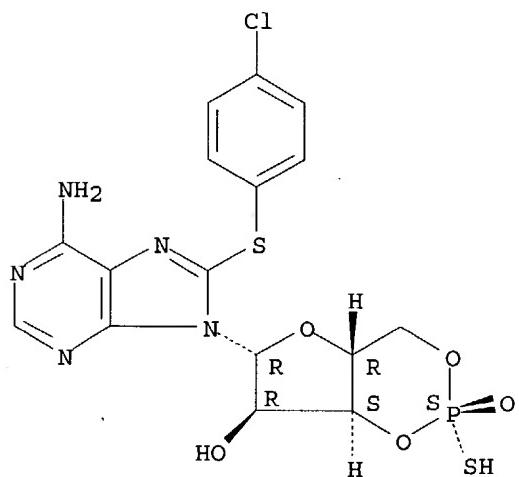


6 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 33 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 129693-13-6 REGISTRY
 CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen (S)-phosphorothioate] (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
 CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphorothioate), (S)-
 FS STEREOSEARCH
 MF C16 H15 Cl N5 O5 P S2
 SR CA
 LC STN Files: CA, CAPLUS, CHEMCATS, CSCHEM
 DT.CA CAplus document type: Journal
 RL.NP Roles from non-patents: BIOL (Biological study); USES (Uses)

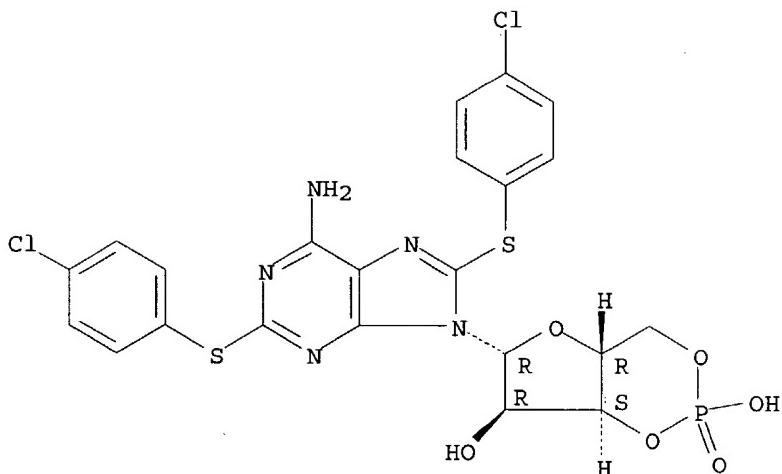
Absolute stereochemistry.



3 REFERENCES IN FILE CA (1907 TO DATE)
 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 34 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 125338-15-0 REGISTRY
 CN Adenosine, 2,8-bis[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
 FS STEREOSEARCH
 MF C22 H18 Cl2 N5 O6 P S2
 SR CA
 LC STN Files: CA, CAPLUS
 DT.CA CAplus document type: Patent
 RL.P Roles from patents: BIOL (Biological study)

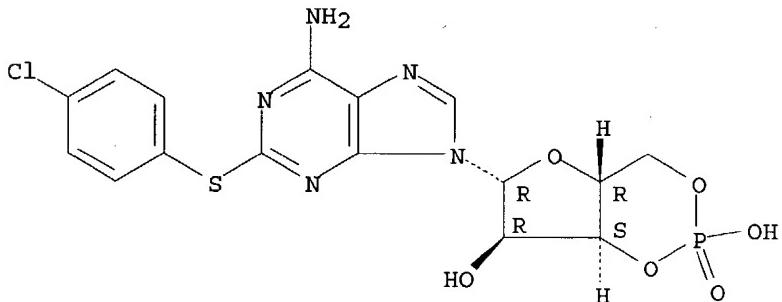
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 35 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 125322-59-0 REGISTRY
 CN Adenosine, 2-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
 FS STEREOSEARCH
 MF C16 H15 Cl N5 O6 P S
 SR CA
 LC STN Files: CA, CAPLUS
 DT.CA Caplus document type: Patent
 RL.P Roles from patents: BIOL (Biological study)

Absolute stereochemistry.

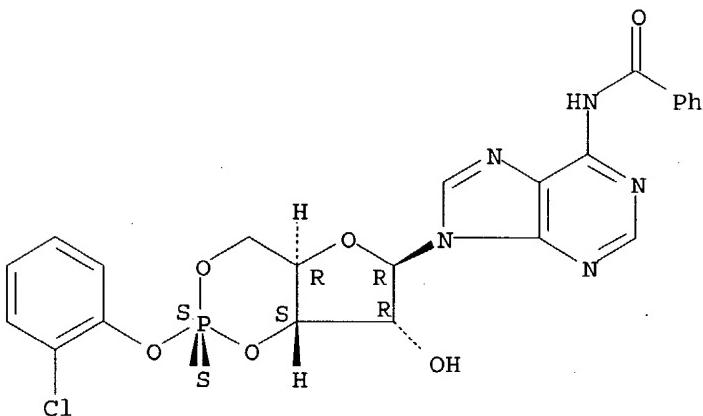


1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 36 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 115351-08-1 REGISTRY
 CN Adenosine, N-benzoyl-, cyclic 3',5'-[O-(2-chlorophenyl)phosphorothioate], (S)- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
 FS STEREOSEARCH
 MF C23 H19 Cl N5 O6 P S
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT
 DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 37 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 115351-05-8 REGISTRY

CN Adenosine, N-benzoyl-2'-O-(tetrahydro-2H-pyran-2-yl)-, cyclic
3',5'-[O-(2-chlorophenyl) phosphorothioate], (S)- (9CI) (CA INDEX
NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C28 H27 Cl N5 O7 P S

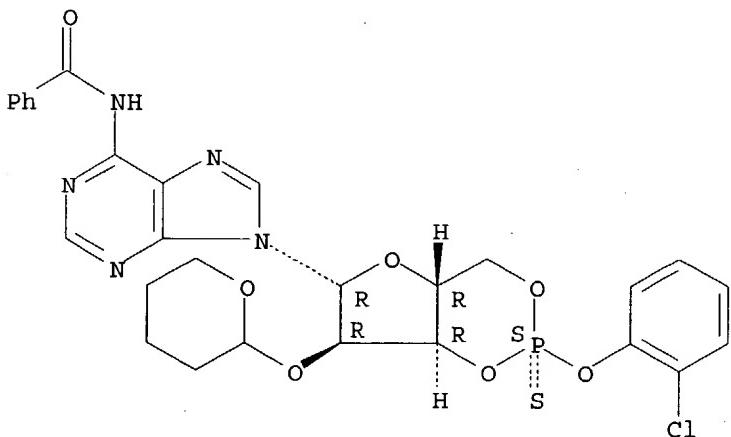
SR CA

LC STN Files: CA, CAPLUS, CASREACT

DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 38 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 115350-97-5 REGISTRY

CN Adenosine, N-benzoyl-, cyclic 3',5'-(O-(2-chlorophenyl) phosphorothioate], (R)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C23 H19 Cl N5 O6 P S

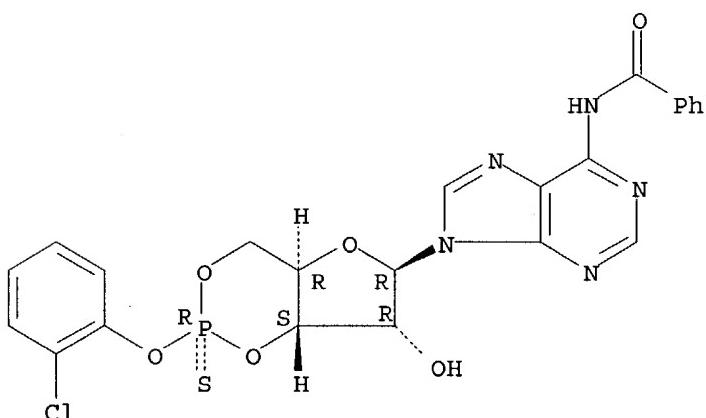
SR CA

LC STN Files: CA, CAPLUS, CASREACT

DT.CA CAPplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 39 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 115350-96-4 REGISTRY

CN Adenosine, N-benzoyl-2'-O-(tetrahydro-2H-pyran-2-yl)-, cyclic 3',5'-(O-(2-chlorophenyl) phosphorothioate], (R)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C28 H27 Cl N5 O7 P S

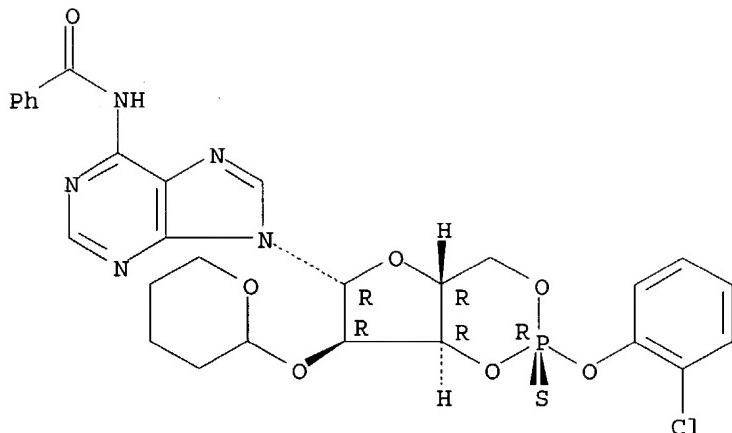
SR CA

LC STN Files: CA, CAPLUS, CASREACT

DT.CA CAPplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 40 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 112141-30-7 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate), ion(1-) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C16 H14 Cl N5 O6 P S

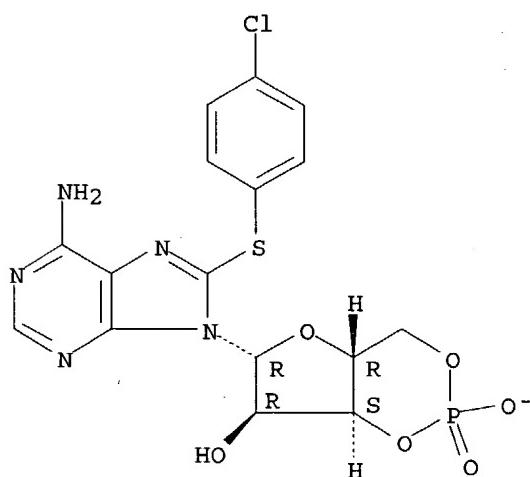
SR CA

LC STN Files: CA, CAPLUS

DT.CA CAPplus document type: Journal

RL.NP Roles from non-patents: ANST (Analytical study); PROC (Process)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 41 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 107538-70-5 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(phenylmethyl phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C23 H21 Cl N5 O6 P S

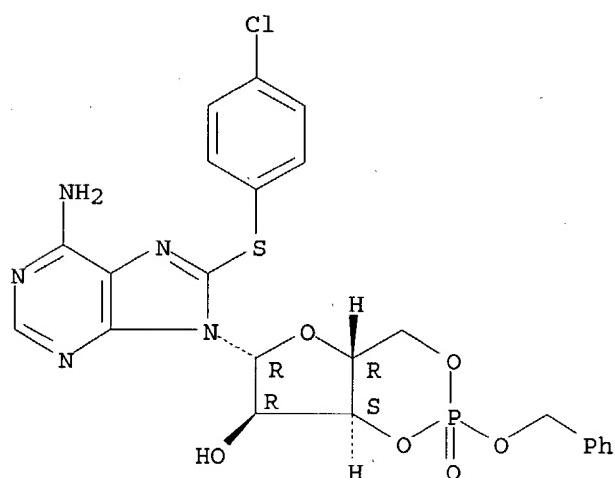
SR CA

LC STN Files: CA, CAPLUS, CASREACT

DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 42 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 93882-12-3 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate), monosodium salt (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C16 H15 Cl N5 O6 P S . Na

SR European Union (EU)

LC STN Files: CA, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, USPATFULL
Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)

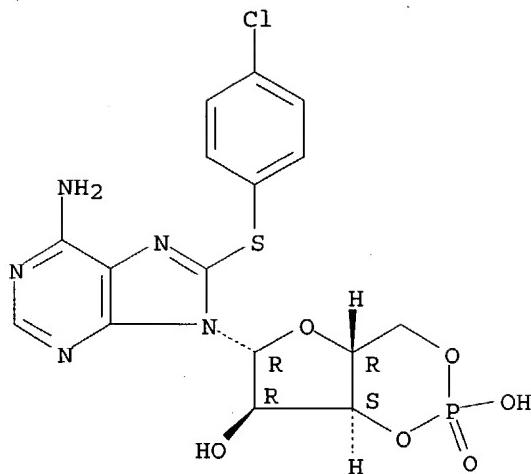
DT.CA CAplus document type: Journal; Patent

RL.P Roles from patents: BIOL (Biological study)

RL.NP Roles from non-patents: BIOL (Biological study)

CRN (41941-66-6)

Absolute stereochemistry.



● Na

3 REFERENCES IN FILE CA (1907 TO DATE)
 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 43 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 81791-92-6 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thiol]-, cyclic 3',5'-(phenylmethyl phosphate), (S)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C23 H21 Cl N5 O6 P S

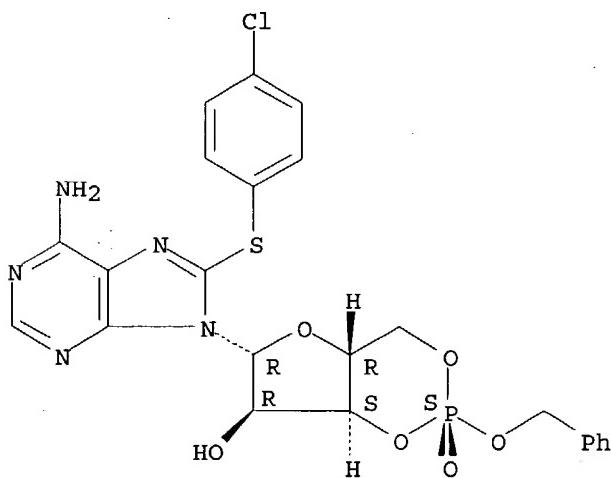
LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation)

RL.NP Roles from non-patents: PREP (Preparation)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 44 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 81791-91-5 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(phenylmethyl phosphate), (R)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C23 H21 Cl N5 O6 P S

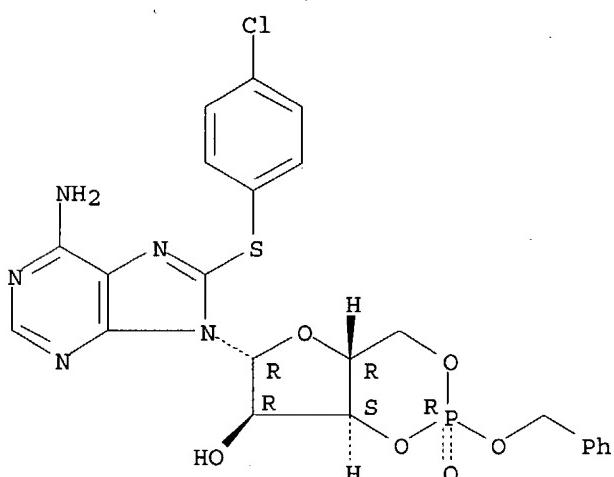
LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation)

RL.NP Roles from non-patents: PREP (Preparation)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 45 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 80345-93-3 REGISTRY

CN Adenosine, 8-[(chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

OTHER NAMES:

CN 8-Chlorophenylthio-cAMP

MF C16 H15 Cl N5 O6 P S

CI IDS

LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER

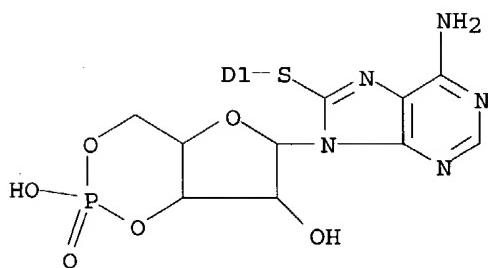
DT.CA Caplus document type: Conference; Journal; Patent

RL.P Roles from patents: BIOL (Biological study); USES (Uses)

RL.NP Roles from non-patents: BIOL (Biological study); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)



D1-C1



17 REFERENCES IN FILE CA (1907 TO DATE)

17 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 46 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 72561-15-0 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-N-(2-methylpropyl)-, cyclic
3',5'- (hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C20 H23 Cl N5 O6 P S

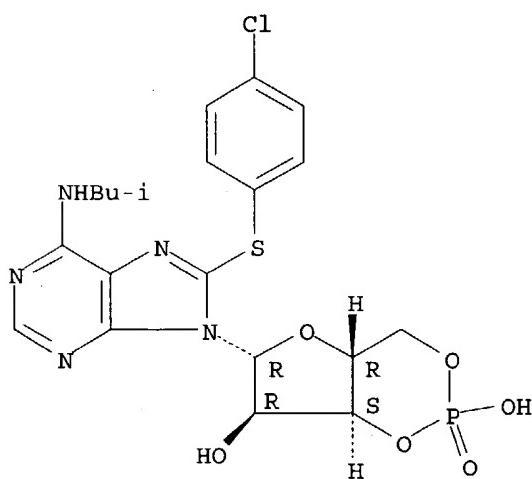
LC STN Files: BEILSTEIN*, CA, CAPLUS

(*File contains numerically searchable property data)

DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 47 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 72549-56-5 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-N-phenyl-, cyclic 3',5'- (hydrogen phosphate) 2'-acetate (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C24 H21 Cl N5 O7 P S

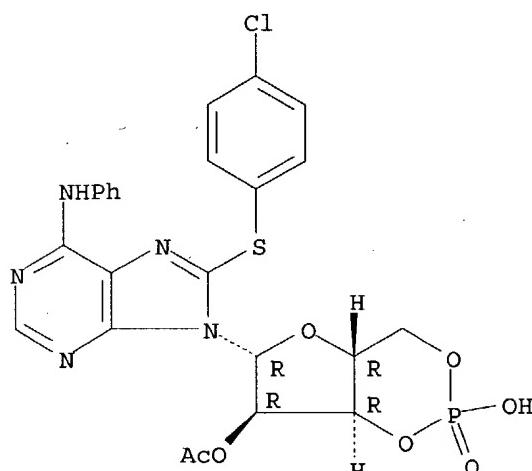
LC STN Files: BEILSTEIN*, CA, CAPLUS

(*File contains numerically searchable property data)

DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 48 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 72549-36-1 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-N-phenyl-, cyclic 3',5'- (hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C22 H19 Cl N5 O6 P S

LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER, USPATFULL

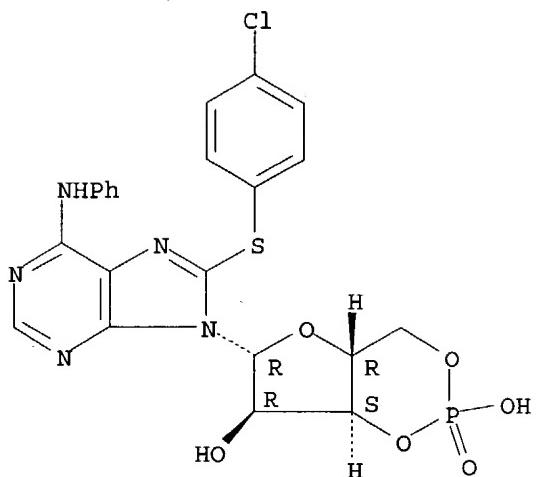
(*File contains numerically searchable property data)

DT.CA CAplus document type: Journal; Patent

RL.P Roles from patents: BIOL (Biological study); USES (Uses)

RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.



6 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 49 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 72549-32-7 REGISTRY

CN Adenosine, N-butyl-8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C20 H23 Cl N5 O6 P S

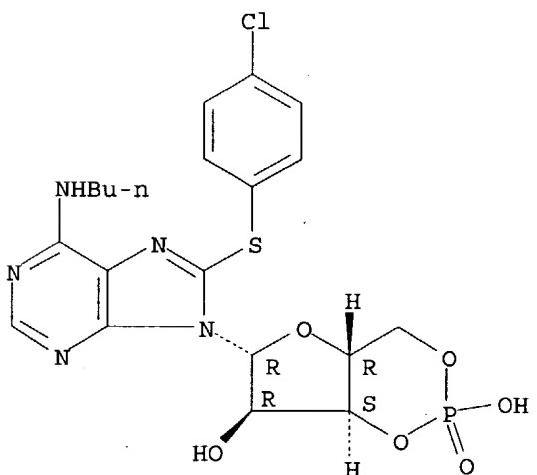
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER, USPATFULL
 (*File contains numerically searchable property data)

DT.CA Caplus document type: Journal; Patent

RL.P Roles from patents: BIOL (Biological study); USES (Uses)

RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.



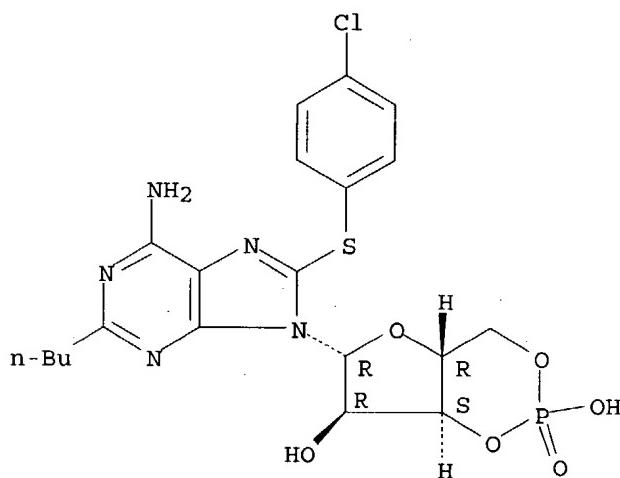
4 REFERENCES IN FILE CA (1907 TO DATE)

4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 50 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 58418-41-0 REGISTRY
 CN Adenosine, 2-butyl-8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
 OTHER NAMES:
 CN 8-(p-Chlorophenylthio)-2-butyladenosine cyclic 3',5'-phosphate
 FS STEREOSEARCH
 MF C20 H23 Cl N5 O6 P S
 LC STN Files: BEILSTEIN*, CA, CAPLUS
 (*File contains numerically searchable property data)
 DT.CA Cplus document type: Journal
 RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

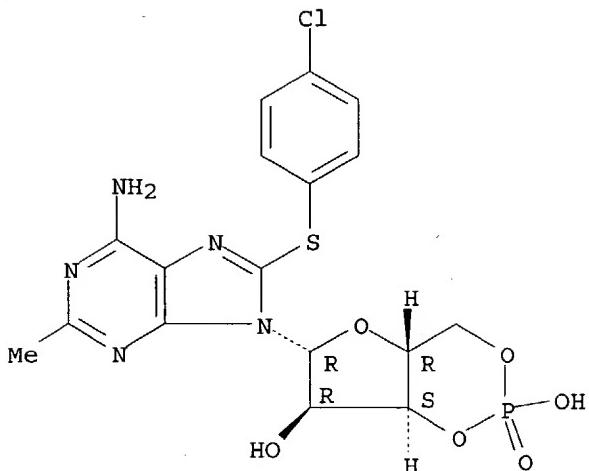
Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 51 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 58418-38-5 REGISTRY
 CN Adenosine, 8-[(4-chlorophenyl)thio]-2-methyl-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
 OTHER NAMES:
 CN 8-(p-Chlorophenylthio)-2-methyladenosine cyclic 3',5'-phosphate
 FS STEREOSEARCH
 MF C17 H17 Cl N5 O6 P S
 LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
 (*File contains numerically searchable property data)
 DT.CA Cplus document type: Journal
 RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

Absolute stereochemistry.



4 REFERENCES IN FILE CA (1907 TO DATE)
 4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 52 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 55628-45-0 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-N,N-diethyl-, cyclic
 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

FS STEREOSEARCH

MF C20 H23 Cl N5 O6 P S

LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER,
 USPATFULL

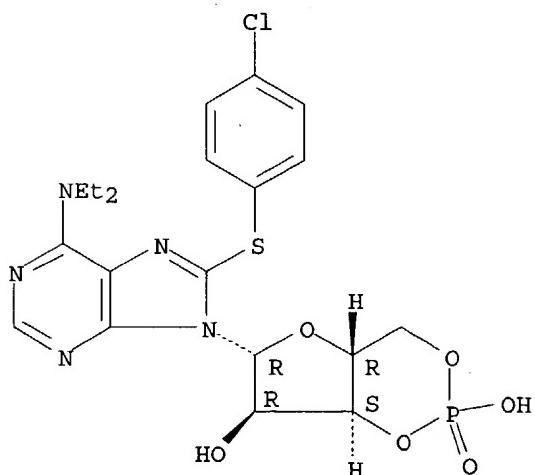
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DT.CA Caplus document type: Journal; Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES
 (Uses)

RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation);
 USES (Uses)

Absolute stereochemistry.



6 REFERENCES IN FILE CA (1907 TO DATE)
 6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 53 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 41941-66-6 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

OTHER NAMES:

CN 8-(4-Chlorophenylthio)-cAMP

CN 8-(4-Chlorophenylthio)cyclic AMP

CN 8-(p-Chlorophenylthio) 3',5'-cyclic AMP

CN 8-(p-Chlorophenylthio)-cAMP

CN 8-(p-Chlorophenylthio)-cyclic AMP

CN 8-(p-Chlorophenylthio)adenosine 3',5'-cyclic phosphate

CN CPT

FS STEREOSEARCH

DR 111750-89-1, 72549-29-2

MF C16 H15 Cl N5 O6 P S

CI COM

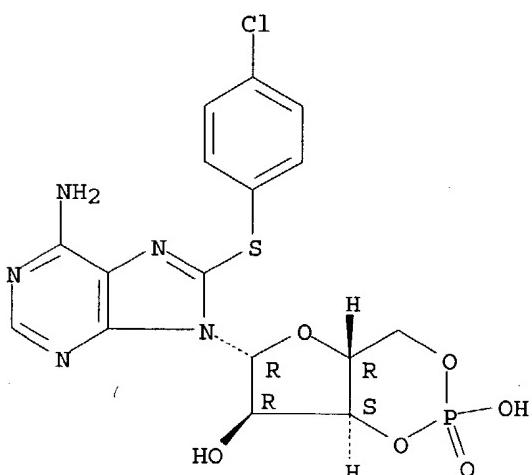
LC STN Files: AGRICOLA, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, EMBASE, MEDLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

DT.CA CAplus document type: Conference; Journal; Patent

RL.P Roles from patents: BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.



250 REFERENCES IN FILE CA (1907 TO DATE)

250 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 54 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 40950-71-8 REGISTRY

CN Adenosine, 8-[(4-chlorophenyl)methyl]thio-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.

OTHER NAMES:

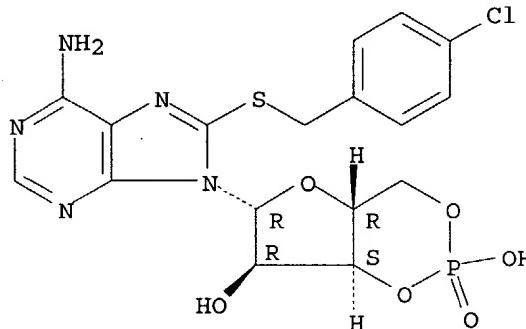
CN 8-[(p-Chlorobenzyl)thio] cyclic AMP

FS STEREOSEARCH

MF C17 H17 Cl N5 O6 P S

LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA Cplus document type: Conference; Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

Absolute stereochemistry.



3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> FIL REGISTRY

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 305.19 | 305.40 |

FILE 'REGISTRY' ENTERED AT 10:35:11 ON 22 DEC 2004
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9
DICTIONARY FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> SET TERMSET E#

SET COMMAND COMPLETED

=> DEL SEL Y

=> SEL L14 53 RN

E1 THROUGH E1 ASSIGNED

=> S E1/RN

L15 1 41941-66-6/RN

=> SET TERMSET LOGIN

SET COMMAND COMPLETED

=> FIL USPATFULL

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 0.50 | 305.90 |

FILE 'USPATFULL' ENTERED AT 10:35:16 ON 22 DEC 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 21 Dec 2004 (20041221/PD)
FILE LAST UPDATED: 21 Dec 2004 (20041221/ED)
HIGHEST GRANTED PATENT NUMBER: US6834393
HIGHEST APPLICATION PUBLICATION NUMBER: US2004255355
CA INDEXING IS CURRENT THROUGH 21 Dec 2004 (20041221/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 21 Dec 2004 (20041221/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2004
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2004

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
>>> original, i.e., the earliest published granted patents or <<<
>>> applications. USPAT2 contains full text of the latest US <<<
>>> publications, starting in 2001, for the inventions covered in <<<
>>> USPATFULL. A USPATFULL record contains not only the original <<<
>>> published document but also a list of any subsequent <<<
>>> publications. The publication number, patent kind code, and <<<
>>> publication date for all the US publications for an invention <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<
>>> records and may be searched in standard search fields, e.g., /PN, <<<
>>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<
>>> through the new cluster USPATALL. Type FILE USPATALL to <<<
>>> enter this cluster. <<<
>>> <<<
>>> Use USPATALL when searching terms such as patent assignees, <<<
>>> classifications, or claims, that may potentially change from <<<
>>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> S L15

L16 17 L15

=> DIS L16 1 TI

L16 ANSWER 1 OF 17 USPATFULL on STN
TI Use of cox-2 inhibitors for preventing immunodeficiency

=> DIS L16 2 TI

L16 ANSWER 2 OF 17 USPATFULL on STN
TI Adipogenic differentiation of human mesenchymal stem cells

=> DIS L16 3 TI

L16 ANSWER 3 OF 17 USPATFULL on STM
TI Methods and compounds for reducing biofilm formulation

=> DIS L16 4 ISTD IABS

THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 4 OF 17 USPATFULL on STM

ACCESSION NUMBER: 2003:253631 USPATFULL

TITLE: Compositions and methods for treatment of hyperproliferative diseases

INVENTOR(S): Benoit, Gerard, Monrsouir, FRANCE

Gronemeyer, Hinrich, Oberkirch, GERMANY, FEDERAL REPUBLIC OF

Lanotte, Michel, Paris, FRANCE

Gottardis, Marco, Princeton, NJ, United States

PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, Princeton, NJ, United States (U.S. corporation)

Institut National de la Sante et de la Recherche Medicale, Paris, FRANCE (non-U.S. corporation)

Centre National de la Recherche Scientifique, Paris, FRANCE (non-U.S. corporation)

Universite Louis Pasteur, Strasbourg, FRANCE (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6624154 B1 20030923
APPLICATION INFO.: US 2000-556675 20000421 (9)

NUMBER DATE

PRIORITY INFORMATION: US 1999-130649P 19990423 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED

LINE COUNT: 2206

ISSUE U.S. PATENT CLASSIF.:

MAIN: 514/168.000

SECONDARY: 424/085.100; 424/194.000; 424/015.000; 424/021.000

CURRENT U.S. PATENT CLASSIF.:

MAIN: 514/168.000

SECONDARY: 424/085.100; 514/355.000; 514/440.000; 514/463.000;
514/569.000

INT. PATENT CLASSIF.: [7]

MAIN: A01N045-00

SECONDARY: A61K038-19

FIELD OF SEARCH: 514/168; 424/155.1; 424/198.1; 424/85.1; 435/194;
435/21; 435/15

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

The invention relates to compositions comprising a retinoid X receptor agonist and an agent capable of activating protein kinase A. The invention also relates to methods of treating hyperproliferative diseases by administering a retinoid X receptor agonist and an agent capable of activating protein kinase A.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 5 ISTD IABS

THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 5 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2003:195010 USPATFULL
TITLE: Promoters of neural regeneration
INVENTOR(S): Song, Hong-jun, La Jolla, CA, UNITED STATES
Poo, Mu-ming, La Jolla, CA, UNITED STATES
Ming, Guo-li, La Jolla, CA, UNITED STATES
Tessier-Lavigne, Marc, San Francisco, CA, UNITED STATES
He, Zhigang, San Francisco, CA, UNITED STATES

| | NUMBER | KIND | DATE |
|-------------------------------|---|------|---------------|
| PATENT INFORMATION: | US 2003134821 | A1 | 20030717 |
| APPLICATION INFO.: | US 2002-272774 | A1 | 20021017 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 2001-900268, filed on 6 Jul 2001, GRANTED, Pat. No. US 6512004 Division of Ser. No. US 1998-145820, filed on 2 Sep 1998, GRANTED, Pat. No. US 6268352 | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LINE COUNT: | 776 | | |
| ISSUE U.S. PATENT CLASSIF.: | | | |
| MAIN: | 514/047.000 | | |
| SECONDARY: | 514/185.000; 514/231.500; 514/471.000; 514/408.000; 514/509.000; 514/326.000 | | |
| CURRENT U.S. PATENT CLASSIF.: | | | |
| MAIN: | 514/047.000 | | |
| SECONDARY: | 514/185.000; 514/231.500; 514/471.000; 514/408.000; 514/509.000; 514/326.000 | | |
| INT. PATENT CLASSIF.: | [7] | | |
| MAIN: | A61K031-7076 | | |
| SECONDARY: | A61K031-5377; A61K031-453; A61K031-555; A61K031-21; A61K031-365 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

The invention provides methods and compositions for promoting neural cell growth and/or regeneration. The general methods involve contacting with an activator of a cyclic nucleotide dependent protein kinase a neural cell subject to growth repulsion mediated by a neural cell growth repulsion factor. The activator may comprise a direct or an indirect activator of the protein kinase; the repulsion factor typically comprises one or more natural, endogenous proteins mediating localized repulsion or inhibition of neural cell growth; and the target cells are generally vertebrate neurons, typically injured mammalian neurons. The subject compositions include mixtures comprising a neural cell, an activator of a cyclic nucleotide dependent protein kinase and a neural cell growth repulsion factor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 6 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 6 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2003:195009 USPATFULL
TITLE: Promoters of neural regeneration
INVENTOR(S): Song, Hong-Jun, La Jolla, CA, UNITED STATES
Poo, Mu-Ming, La Jolla, CA, UNITED STATES
Ming, Guo-Li, La Jolla, CA, UNITED STATES
Tessier-Lavigne, Marc, San Francisco, CA, UNITED STATES
He, Zhigang, San Francisco, CA, UNITED STATES

| NUMBER | KIND | DATE |
|--------|------|------|
|--------|------|------|

PATENT INFORMATION: US 2003134820 A1 20030717
APPLICATION INFO.: US 2002-272741 A1 20021017 (10)
RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-900268, filed on 6 Jul 2001, GRANTED, Pat. No. US 6512004 Division of Ser. No. US 1998-145820, filed on 2 Sep 1998, GRANTED, Pat. No. US 6268352

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LINE COUNT: 776
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 514/185.000; 514/231.500; 514/326.000; 514/509.000;
514/263.340; 514/471.000

CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 514/185.000; 514/231.500; 514/326.000; 514/509.000;
514/263.340; 514/471.000

INT. PATENT CLASSIF.: [7]
MAIN: A61K031-7076
SECONDARY: A61K031-555; A61K031-5377; A61K031-453; A61K031-522;
A61K031-21; A61K031-365

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

The invention provides methods and compositions for promoting neural cell growth and/or regeneration. The general methods involve contacting with an activator of a cyclic nucleotide dependent protein kinase a neural cell subject to growth repulsion mediated by a neural cell growth repulsion factor. The activator may comprise a direct or an indirect activator of the protein kinase; the repulsion factor typically comprises one or more natural, endogenous proteins mediating localized repulsion or inhibition of neural cell growth; and the target cells are generally vertebrate neurons, typically injured mammalian neurons. The subject compositions include mixtures comprising a neural cell, an activator of a cyclic nucleotide dependent protein kinase and a neural cell growth repulsion factor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 7 ISTD IABS

THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 7 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2002:259417 USPATFULL
TITLE: Promoters of neural regeneration
INVENTOR(S): Song, Hong-Jun, La Jolla, CA, UNITED STATES
Poo, Mu-Ming, La Jolla, CA, UNITED STATES
Ming, Guo-Li, La Jolla, CA, UNITED STATES
Tessier-Lavigne, Marc, San Francisco, CA, UNITED STATES
He, Zhigang, San Francisco, CA, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------------|--|------|---------------|
| PATENT INFORMATION: | US 2002142990 | A1 | 20021003 |
| APPLICATION INFO.: | US 2002-90095 | A1 | 20020228 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 2001-900268, filed on 6 Jul 2001, PENDING Division of Ser. No. US 1998-145820, filed on 2 Sep 1998, GRANTED, Pat. No. US 6268352 | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LINE COUNT: | 775 | | |
| ISSUE U.S. PATENT CLASSIF.: | | | |
| MAIN: | 514/048.000 | | |

SECONDARY: 514/185.000; 514/231.500; 514/320.000; 514/410.000;
514/263.320

CURRENT U.S. PATENT CLASSIF.:

MAIN: 514/048.000

SECONDARY: 514/185.000; 514/231.500; 514/320.000; 514/410.000;
514/263.320

INT. PATENT CLASSIF.: [7]

MAIN: A61K031-711

SECONDARY: A61K031-555; A61K031-522; A61K031-5377; A61K031-4525

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

The invention provides methods and compositions for promoting neural cell growth and/or regeneration. The general methods involve contacting with an activator of a cyclic nucleotide dependent protein kinase a neural cell subject to growth repulsion mediated by a neural cell growth repulsion factor. The activator may comprise a direct or an indirect activator of the protein kinase; the repulsion factor typically comprises one or more natural, endogenous proteins mediating localized repulsion or inhibition of neural cell growth; and the target cells are generally vertebrate neurons, typically injured mammalian neurons. The subject compositions include mixtures comprising a neural cell, an activator of a cyclic nucleotide dependent protein kinase and a neural cell growth repulsion factor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 8 ISTD IABS

THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS

DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 8 OF 17 USPATFULL on STN

ACCESSION NUMBER: 2002:12535 USPATFULL

TITLE: Promoters of neural regeneration

INVENTOR(S): Song, Hong-jun, La Jolla, CA, UNITED STATES

Poo, Mu-Ming, La Jolla, CA, UNITED STATES

Ming, Guo-li, La Jolla, CA, UNITED STATES

Tessier-Lavigne, Marc, San Francisco, CA, UNITED STATES

He, Zhigang, San Francisco, CA, UNITED STATES

| NUMBER | KIND | DATE |
|--------|------|------|
|--------|------|------|

PATENT INFORMATION: US 2002006916 A1 20020117

APPLICATION INFO.: US 6512004 B2 20030128

RELATED APPLN. INFO.: US 2001-900268 A1 20010706 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1998-145820, filed on 2 Sep 1998, GRANTED, Pat. No. US 6268352

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LINE COUNT: 1042

ISSUE U.S. PATENT CLASSIF.:

MAIN: 514/047.000

SECONDARY: 514/231.500; 514/185.000; 514/262.000; 514/424.000;
514/509.000

CURRENT U.S. PATENT CLASSIF.:

MAIN: 514/455.000

SECONDARY: 514/042.000; 514/047.000; 514/048.000; 514/085.000;
514/174.000; 514/183.000; 514/192.000; 514/211.120;
514/220.000; 514/227.200; 514/248.000; 514/263.380;
514/376.000; 514/423.000; 514/453.000

INT. PATENT CLASSIF.: [7]

MAIN: A61K031-7105

SECONDARY: A61K031-5377; A61K031-555; A61K031-4015; A61K031-522;
A61K031-21

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

The invention provides methods and compositions for promoting neural cell growth and/or regeneration. The general methods involve contacting with an activator of a cyclic nucleotide dependent protein kinase a neural cell subject to growth repulsion mediated by a neural cell growth repulsion factor. The activator may comprise a direct or an indirect activator of the protein kinase; the repulsion factor typically comprises one or more natural, endogenous proteins mediating localized repulsion or inhibition of neural cell growth; and the target cells are generally vertebrate neurons, typically injured mammalian neurons. The subject compositions include mixtures comprising a neural cell, an activator of a cyclic nucleotide dependent protein kinase and a neural cell growth repulsion factor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 9 ISTD IABS

THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 9 OF 17 USPATFULL on STN

ACCESSION NUMBER: 2001:214653 USPATFULL

TITLE: Adipogenic differentiation of human mesenchymal stem cells

INVENTOR(S): Pittenger, Mark F., Severna Park, MD, United States
Beck, Stephen C., Reisterstown, MD, United States

PATENT ASSIGNEE(S): Osiris Therapeutics, Inc., Baltimore, MD, United States
(U.S. corporation)

| NUMBER | KIND | DATE |
|--------|------|------|
|--------|------|------|

| | | |
|------------|----|----------|
| US 6322784 | B1 | 20011127 |
|------------|----|----------|

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|----------------|--|--------------|
| US 1998-246003 | | 19981026 (9) |
|----------------|--|--------------|

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|-----------------------|---|
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 1996-700753, filed on 30 Jul 1996, now patented, Pat. No. US 5827740 |
|-----------------------|---|

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|----------------|---------|
| DOCUMENT TYPE: | Utility |
|----------------|---------|

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| FILE SEGMENT: | GRANTED |
|---------------|---------|

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|-------------|------|
| LINE COUNT: | 1019 |
|-------------|------|

| | |
|-----------------------------|--|
| ISSUE U.S. PATENT CLASSIF.: | |
|-----------------------------|--|

| | |
|-------|-------------|
| MAIN: | 424/093.700 |
|-------|-------------|

| | |
|------------|--|
| SECONDARY: | 514/003.000; 514/046.000; 514/169.000; 514/171.000; 435/325.000; 435/366.000; 435/372.000; 435/377.000; 435/395.000; 435/405.000; 530/303.000; 552/502.000; 562/503.000 |
|------------|--|

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| CURRENT U.S. PATENT CLASSIF.: | |
|-------------------------------|--|

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|-------|-------------|
| MAIN: | 424/093.700 |
|-------|-------------|

| | |
|------------|--|
| SECONDARY: | 435/325.000; 435/366.000; 435/372.000; 435/377.000; 435/395.000; 435/405.000; 514/003.000; 514/046.000; 514/169.000; 514/171.000; 530/303.000; 552/502.000; 562/503.000 |
|------------|--|

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| INT. PATENT CLASSIF.: | [7] |
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| | |
|-------|------------|
| MAIN: | A01N063-00 |
|-------|------------|

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| SECONDARY: | C12N005-06; C12N005-02; A61K038-28; C07J053-00 |
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| FIELD OF SEARCH: | 424/93.7; 514/3; 514/46; 514/169; 514/171; 435/325; 435/366; 435/372; 435/377; 435/405; 435/395; 530/303; 552/502; 562/503 |
|------------------|--|

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

A composition which comprises human mesenchymal stem cells which have the potential to differentiate into cells of more than one connective tissue type and a composition which induces cells from the mesenchymal stem cell population to differentiate into the adipogenic lineage, and a process for inducing such differentiation. The composition for inducing such differentiation comprises a

glucocorticoid, a compound which stimulates cAMP production or inhibits cAMP degradation (such as a phosphodiesterase inhibitor), and/or a compound which upregulates peroxisome proliferator activated receptor γ (PPAR γ) expression and/or increases its binding affinity to its DNA binding site. The process can further include isolating the adipocytes from remaining hMSCs.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 10 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 10 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2001:147750 USPATFULL
TITLE: Method for generating dopaminergic cells derived from neural precursors
INVENTOR(S): Bowen, David C., Washington, DC, United States
 Johe, Karl K., Potomac, MD, United States
PATENT ASSIGNEE(S): NeuralStem Biopharmaceuticals, Ltd., College Park, MD, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-------------------------------|--|------|--------------|
| PATENT INFORMATION: | US 6284539 | B1 | 20010904 |
| APPLICATION INFO.: | US 1998-169309 | | 19981009 (9) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | GRANTED | | |
| LINE COUNT: | 1635 | | |
| ISSUE U.S. PATENT CLASSIF.: | | | |
| MAIN: | 435/455.000 | | |
| SECONDARY: | 435/320.100; 435/325.000; 435/368.000; 424/093.210; 514/044.000; 536/023.100; 536/023.500 | | |
| CURRENT U.S. PATENT CLASSIF.: | | | |
| MAIN: | 435/455.000 | | |
| SECONDARY: | 424/093.210; 435/320.100; 435/325.000; 435/368.000; 514/044.000; 536/023.100; 536/023.500 | | |
| INT. PATENT CLASSIF.: | [7] | | |
| MAIN: | C12N015-63 | | |
| SECONDARY: | C12N015-85; C12N015-87; C12N015-00; C12N015-09 | | |
| FIELD OF SEARCH: | 435/467; 435/368; 435/320.1; 435/325; 435/455; 514/44; 424/93.21; 536/23.1; 536/23.5 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

The present invention describes a novel method to direct a particular set of fate choice decisions by multipotential precursor cells from the central nervous system. Specifically we show that introducing the gene coding for the nuclear receptor, Nurrl, into central nervous system (CNS) stem cells causes cells to adopt a dopaminergic cell fate. One use of this technology would be to prepare in vitro neural populations enriched in dopaminergic cells for transplantation in Parkinson's Disease or other neurological disorders. Furthermore, the finding that Nurrl expression induces a dopaminergic phenotype suggests that introducing this gene into the brains of patients in which dopaminergic cells are degenerating or have been injured may promote the functional recovery of these neurons and thus the clinical recovery of the patient. Finally, the technology described in this application could be incorporated into a program of drug screening or gene discovery.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 11 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 11 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2001:121459 USPATFULL
TITLE: Promoters of neural regeneration
INVENTOR(S): Song, Hong-jun, La Jolla, CA, United States
Poo, Mu-Ming, La Jolla, CA, United States
Ming, Guo-li, La Jolla, CA, United States
Tessier-Lavigne, Marc, San Francisco, CA, United States
He, Zhigang, San Francisco, CA, United States
PATENT ASSIGNEE(S): The Regents of the University of California, Oakland, CA, United States (U.S. corporation)

| NUMBER | KIND | DATE |
|----------------|------|--------------|
| US 6268352 | B1 | 20010731 |
| US 1998-145820 | | 19980902 (9) |

Services, Washington, DC, United States (U.S.
government)

| | NUMBER | KIND | DATE |
|--|---|------|--------------|
| PATENT INFORMATION: | US 5902794 | | 19990511 |
| APPLICATION INFO.: | US 1997-937020 | | 19970924 (8) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1994-329764, filed on 27 Oct 1994, now patented, Pat. No. US 5792752 which is a continuation of Ser. No. US 1992-896452, filed on 4 Jun 1992, now abandoned which is a continuation of Ser. No. US 1988-198489, filed on 23 May 1988, now abandoned | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| LINE COUNT: | 1524 | | |
| ISSUE U.S. PATENT CLASSIF.: | | | |
| MAIN: | 514/047.000 | | |
| SECONDARY: | 536/026.130 | | |
| CURRENT U.S. PATENT CLASSIF.: | | | |
| MAIN: | 514/047.000 | | |
| SECONDARY: | 536/026.130 | | |
| INT. PATENT CLASSIF.: | [6] | | |
| MAIN: | A61K031-70 | | |
| SECONDARY: | C07H019-213 | | |
| FIELD OF SEARCH: | 514/47; 536/26.13 | | |
| CAS INDEXING IS AVAILABLE FOR THIS PATENT. | | | |
| ABSTRACT: | | | |

Site 1- and site 2-selective derivatives of cAMP have been found to inhibit the of a variety of cancer and leukemic cells. The compounds have been found to have a synergistic effect in cancer and leukemic cell growth inhibition when a site 1-selective compounds is used in combination with a site 2-selective compound.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 13 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y) /N:Y

L16 ANSWER 13 OF 17 USPATFULL on STN
ACCESSION NUMBER: 1998:131612 USPATFULL
TITLE: Adipogenic differentiation of human mesenchymal stem cells
INVENTOR(S): Pittenger, Mark F., Severna Park, MD, United States
PATENT ASSIGNEE(S): Osiris Therapeutics, Inc., Baltimore, MD, United States
(U.S. corporation)

| | NUMBER | KIND | DATE |
|-------------------------------|---|------|--------------|
| PATENT INFORMATION: | US 5827740 | | 19981027 |
| APPLICATION INFO.: | US 1996-700753 | | 19960730 (8) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| LINE COUNT: | 763 | | |
| ISSUE U.S. PATENT CLASSIF.: | | | |
| MAIN: | 435/372.000 | | |
| SECONDARY: | 435/366.000; 435/377.000; 435/405.000; 514/046.000; 514/171.000; 514/261.000; 514/263.000; 514/415.000; 532/002.000 | | |
| CURRENT U.S. PATENT CLASSIF.: | | | |
| MAIN: | 435/372.000 | | |
| SECONDARY: | 435/366.000; 435/377.000; 435/405.000; 514/046.000; 514/171.000; 514/263.310; 514/263.400; 514/415.000 | | |

INT. PATENT CLASSIF.: [6]
MAIN: C12N005-08
SECONDARY: C07J001-00; A61K045-00
FIELD OF SEARCH: 435/377; 435/372; 435/366; 435/405; 424/572; 424/574;
514/171; 514/46; 514/261; 514/263; 514/415; 532/2

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

A composition which comprises human mesenchymal stem cells which have the potential to differentiate into cells of more than one connective tissue type and a composition which induces cells from the mesenchymal stem cell population to differentiate into the adipogenic lineage, and a process for inducing such differentiation. The composition for inducing such differentiation comprises a glucocorticoid and a compound which stimulates cAMP production or inhibits cAMP degradation (such as a phosphodiesterase inhibitor). The process can further include isolating the adipocytes from remaining hMSCs.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 14 ISTD IABS

THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 14 OF 17 USPATFULL on STN
ACCESSION NUMBER: 1998:95525 USPATFULL
TITLE: 8-chloro camp and related camp compounds as
antineoplastic agents
INVENTOR(S): Cho-Chung, Yoon Sang, Bethesda, MD, United States
Robins, deceased, Roland K., late of Provo, UT, United
States by Lessa R. Robins, legal representative
PATENT ASSIGNEE(S): The United States of America as represented by the
Department of Health and Human Services, Washington,
DC, United States (U.S. government)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 5792752 | | 19980811 |
| APPLICATION INFO.: | US 1994-329764 | | 19941027 (8) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1992-896452, filed on 4 Jun 1992, now abandoned which is a continuation of Ser. No. US 1988-198489, filed on 23 May 1988, now abandoned | | |

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
LINE COUNT: 1567
ISSUE U.S. PATENT CLASSIF.:

MAIN: 514/047.000
SECONDARY: 536/026.130

CURRENT U.S. PATENT CLASSIF.:

MAIN: 514/047.000
SECONDARY: 536/026.130

INT. PATENT CLASSIF.: [6]

MAIN: A61K031-70

FIELD OF SEARCH: 514/47; 536/26.13

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

Site 1- and site 2-selective derivatives of cAMP have been found to inhibit the growth of a variety of cancer and leukemic cells. The compounds have been found to have a synergistic effect in cancer and leukemic cell growth inhibition when a site 1-selective compound is used in combination with a site 2-selective compound.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 15 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 15 OF 17 USPATFULL on STN
ACCESSION NUMBER: 97:112356 USPATFULL
TITLE: Membrane-permeant second messengers
INVENTOR(S): Tsien, Roger Y., La Jolla, CA, United States
Schultz, Carsten, La Jolla, CA, United States
PATENT ASSIGNEE(S): The Regents of the University of California, Oakland,
CA, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------------|--|---------|--------------|
| PATENT INFORMATION: | US 5693521 | | 19971202 |
| APPLICATION INFO.: | US 1993-45585 | | 19930409 (8) |
| DOCUMENT TYPE: | | Utility | |
| FILE SEGMENT: | | Granted | |
| LINE COUNT: | 1259 | | |
| ISSUE U.S. PATENT CLASSIF.: | | | |
| MAIN: | 435/240.100 | | |
| SECONDARY: | 514/045.000; 514/047.000; 514/048.000; 435/007.210; 435/240.200; 536/026.700; 536/026.710; 536/026.720; 536/027.300; 536/117.000 | | |

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|-------------------------------|--|
| CURRENT U.S. PATENT CLASSIF.: | |
| MAIN: | 435/325.000 |
| SECONDARY: | 435/007.210; 514/045.000; 514/047.000; 514/048.000; 536/026.700; 536/026.710; 536/026.720; 536/027.300; 536/117.000 |
| INT. PATENT CLASSIF.: | [6] |
| MAIN: | A61K031-70 |
| SECONDARY: | C07H019-167; C07H019-20; C12N005-00 |
| FIELD OF SEARCH: | 514/47; 514/48; 514/45; 514/75; 514/25; 514/102; 514/103; 514/104; 536/1.11; 536/4.1; 536/26.7; 536/26.71; 536/26.72; 536/27.3; 536/117; 435/7.21; 435/240.1; 435/240.2 |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

Acyloxyalkyl esters of phosphate-containing second messengers which are capable of permeating cell membranes. Once inside the cell, the ester derivatives undergo enzymatic conversion to the biologically active form of the second messenger. Acyloxyalkyl esters of second messengers, such as cAMP, cGMP, inositol triphosphate and inositol tetraphosphate are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 16 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 16 OF 17 USPATFULL on STN
ACCESSION NUMBER: 88:72404 USPATFULL
TITLE: Pest controlling agents
INVENTOR(S): Nathanson, James A., Wellesley, MA, United States
PATENT ASSIGNEE(S): The General Hospital Corporation, Boston, MA, United
States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 4783457 | | 19881108 |
| APPLICATION INFO.: | US 1987-26968 | | 19870317 (7) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1984-605847, filed on 1 May | | |

1984, now patented, Pat. No. US 4678775
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
LINE COUNT: 975
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/227.200
SECONDARY: 514/256.000; 514/365.000; 514/374.000; 514/377.000;
514/401.000; 514/426.000; 514/638.000; 514/653.000;
514/228.800

CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/227.200
SECONDARY: 514/228.800; 514/256.000; 514/365.000; 514/374.000;
514/377.000; 514/401.000; 514/426.000; 514/653.000;
514/658.000

INT. PATENT CLASSIF.: [4]
MAIN: A01N043-84
SECONDARY: A01N043-54; A01N043-78; A01N043-76
FIELD OF SEARCH: 514/183; 514/222; 514/254; 514/256; 514/263; 514/370;
514/396; 514/398; 514/404; 514/637; 514/653; 514/677;
514/365; 514/374; 514/377; 514/426; 514/638

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

The invention relates to an invertebrate pest controlling composition comprising an invertebrate pest-controlling amount of a non-formamidine octopamine against having substantial activity toward an octopamine receptor present in an invertebrate pest and a pesticidally inert carrier.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 17 ISTD IABS

THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 17 OF 17 USPATFULL on STN
ACCESSION NUMBER: 87:48849 USPATFULL
TITLE: Method of controlling pests
INVENTOR(S): Nathanson, James A., P.O. Box 719, 1 Grove St.,
Wellesley, MA, United States 02181

| | NUMBER | KIND | DATE |
|-----------------------------|--|------|--------------|
| PATENT INFORMATION: | US 4678775 | | 19870707 |
| APPLICATION INFO.: | US 1984-605847 | | 19840501 (6) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| LINE COUNT: | 1065 | | |
| ISSUE U.S. PATENT CLASSIF.: | | | |
| MAIN: | 514/047.000 | | |
| SECONDARY: | 514/183.000; 514/222.000; 514/254.000; 514/256.000; 514/263.000; 514/370.000; 514/396.000; 514/398.000; 514/401.000; 514/637.000; 514/653.000; 514/677.000 | | |

CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 514/081.000; 514/183.000; 514/227.200; 514/228.800;
514/249.000; 514/256.000; 514/370.000; 514/396.000;
514/398.000; 514/401.000; 514/637.000; 514/653.000;
514/677.000

INT. PATENT CLASSIF.: [4]
MAIN: A01N043-04
SECONDARY: A01N043-00; A01N043-84; A01N043-58
FIELD OF SEARCH: 424/45; 424/253; 424/180; 424/273R; 424/316; 424/326;
424/DIG.8; 514/47; 514/183; 514/222; 514/254; 514/256;
514/263; 514/396; 514/398; 514/451; 514/637; 514/653;

514/677; 514/370

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

A method of controlling a pest which comprises bringing into contact with the pest a pest-controlling amount of an agent selected from the group consisting of

- (1) a non-formamidine -p-octopamine agonist having substantial activity toward an octopamine receptor present in the pest;
- (2) a compound directly and substantially stimulating the enzyme, adenylate cyclase; and
- (3) a cyclic adenosine monophosphate (cAMP) analogue.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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Executing the logoff script...

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| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 35.23 | 341.13 |

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 10:39:10 ON 22 DEC 2004

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1635KXH

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'USPATFULL' AT 11:08:20 ON 22 DEC 2004
FILE 'USPATFULL' ENTERED AT 11:08:20 ON 22 DEC 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 35.23 | 341.13 |

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17 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET SIZE
The answer numbers requested are not in the answer set.

ENTER ANSWER NUMBER OR RANGE (1):L14

ANSWER NUMBERS NOT CORRECTLY SPECIFIED

Enter an answer number, Example: 10

several answer numbers, Example: 3,7,10

a range of answer numbers, Example: 5-10

or a combination of these. Example: 3,7,9-10,15

ENTER ANSWER NUMBER OR RANGE (1):1

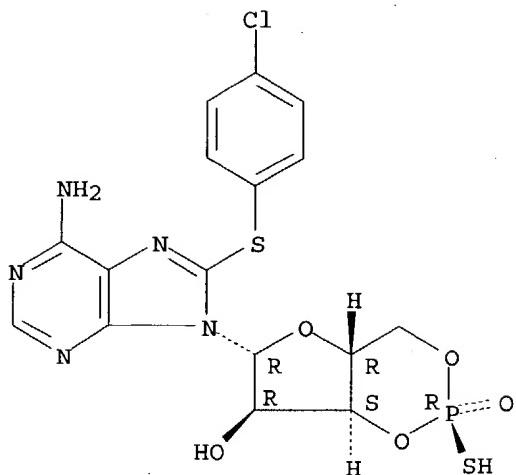
L16 ANSWER 1 OF 17 USPATFULL on STN

AN 2004:108238 USPATFULL
TI Use of cox-2 inhibitors for preventing immunodeficiency
IN Tasken, Kjetil, Rykkinn, NORWAY
Moutschen, Michel, Neupre, BELGIUM
Rahmouni-Piette, Souad, Seraing, BELGIUM
Aandahl, Einar Martin, Lillehammer, NORWAY
Aukurst, P?aring,l, Ridabu, NORWAY
Fr.o slashed.land, Stig S, Oslo, NORWAY
Johansson, Christian C, Oslo, NORWAY
Hansson, Vidar, Sandvika, NORWAY
Klaveness, Jo, Oslo, NORWAY
PI US 2004082640 A1 20040429
AI US 2003-333657 A1 20030606 (10)
WO 2001-GB3284 20010720
PRAI GB 2000-17908 20000720
GB 2001-9648 20010419
DT Utility
FS APPLICATION
LN.CNT 1698
INCL INCLM: 514/406.000
INCLS: 514/471.000
NCL NCLM: 514/406.000
NCLS: 514/471.000
IC [7]
ICM: A61K031-365
ICS: A61K031-415
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L14 ANSWER 22 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 221905-35-7 REGISTRY
CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen (R)-phosphorothioate], monosodium salt (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H15 Cl N5 O5 P S2 . Na
SR CAS Client Services
CRN (129735-01-9)

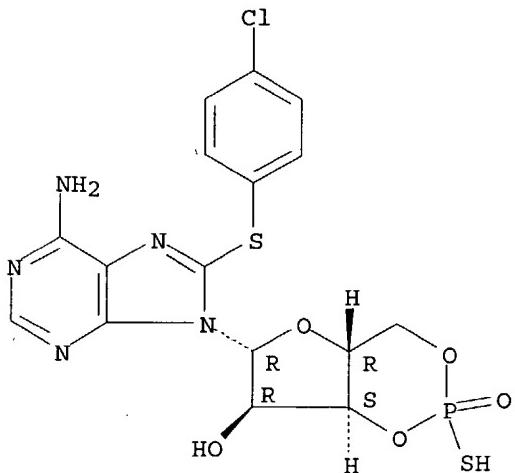
Absolute stereochemistry.



● Na

L14 ANSWER 26 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
 RN 152322-59-3 REGISTRY
 CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphorothioate) (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
 FS STEREOSEARCH
 MF C16 H15 Cl N5 O5 P S2
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
 DT.CA CAplus document type: Journal; Patent
 RL.P Roles from patents: BIOL (Biological study)
 RL.NP Roles from non-patents: BIOL (Biological study)

Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 32 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 129735-01-9 REGISTRY
CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen (R)-phosphorothioate] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
CN Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen phosphorothioate], (R)-

FS STEREOSEARCH

MF C16 H15 Cl N5 O5 P S2

CI COM

SR CA

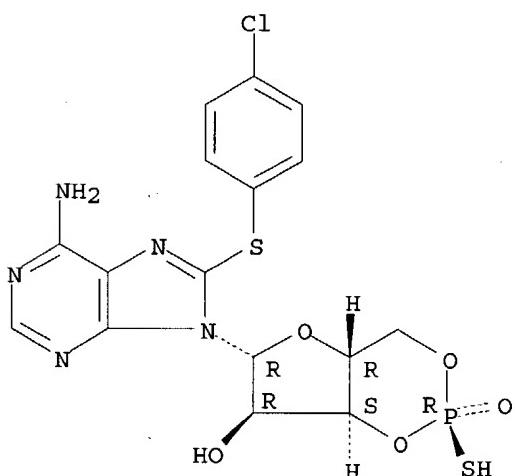
LC STN Files: CA, CAPLUS, CHEMCATS, CSCHEM, TOXCENTER

DT.CA CAplus document type: Journal; Patent

RL.P Roles from patents: BIOL (Biological study); PROC (Process); USES (Uses)

RL.NP Roles from non-patents: BIOL (Biological study); USES (Uses)

Absolute stereochemistry.



6 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> FIL REGISTRY

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|----------------------|------------------|---------------|
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DICTIONARY FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9

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=> SEL L14 32 RN

E1 THROUGH E1 ASSIGNED

=> S E1/RN

L17 1 129735-01-9/RN

=> SET TERMSET LOGIN

SET COMMAND COMPLETED

=> FIL CAPLUS

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FILE COVERS 1907 - 22 Dec 2004 VOL 141 ISS 26
FILE LAST UPDATED: 21 Dec 2004 (20041221/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> S L17

L18 6 L17

=> D IBIB ABS TOT

L18 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:701995 CAPLUS

DOCUMENT NUMBER: 139:303762
TITLE: cAMP analog mapping of Epac1 and cAMP kinase:
discriminating analogs demonstrate that Epac and camp
kinase act synergistically to promote PC-12 cell
neurite extension
AUTHOR(S): Christensen, Anne E.; Selheim, Frode; de Rooij, Johan;
Dremier, Sarah; Schwede, Frank; Dao, Khanh K.;
Martinez, Aurora; Maenhaut, Carine; Bos, Johannes L.;
Genieser, H.-G.; Doskeland, Stein O.
CORPORATE SOURCE: Departments of Anatomy and Cell Biology, University of
Bergen, Bergen, 5009, Norway
SOURCE: Journal of Biological Chemistry (2003), 278(37),
35394-35402
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular
Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Little is known about the relative role of cAMP-dependent protein kinase (cAPK) and guanine exchange factor directly activated by cAMP (Epac) as mediators of cAMP action. The authors tested cAMP analogs for ability to selectively activate Epac1 or cAPK and discriminate between the binding sites of Epac and of cAPK I and cAPK II. The authors found that commonly used cAMP analogs, like 8-Br-cAMP and 8-pCPT-cAMP, activate Epac and cAPK equally as well as cAMP, i.e., were full agonists. In contrast, 6-modified cAMP analogs, like N6-benzoyl-cAMP, were inefficient Epac activators and full cAPK activators. Analogs modified in the 2'-position of the ribose induced stronger Epac1 activation than cAMP but were only partial agonists for cAPK. 2'-O-Alkyl substitution of cAMP improved Epac/cAPK binding selectivity 10-100-fold. Phenylthio substituents in position 8, particularly with MeO- or Cl- in p-position, enhanced the Epac/cAPK selectivity even more. The combination of 8-pCPT- and 2'-O-Me substitutions improved the Epac/cAPK binding selectivity about three orders of magnitude. The cAPK selectivity of 6-substituted cAMP analogs, the preferential inhibition of cAPK by moderate concns. of Rp-cAMPS analogs, and the Epac selectivity of 8-pCPT-2'-O-methyl-cAMP was also demonstrated in intact cells. Using these compds. to selectively modulate Epac and cAPK in PC-12 cells, the authors observed that analogs selectively activating Epac synergized strongly with cAPK specific analogs to induce neurite outgrowth. The authors therefore conclude that cAMP-induced neurite outgrowth is mediated by both Epac and cAPK.

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:656228 CAPLUS
DOCUMENT NUMBER: 136:31499
TITLE: Evidence that the anti-spasmogenic effect of the
β-adrenoceptor agonist, isoprenaline, on
guinea-pig trachealis is not mediated by cyclic
AMP-dependent protein kinase
AUTHOR(S): Spicuzza, Lucia; Belvisi, Maria G.; Birrell, Mark A.;
Barnes, Peter J.; Hele, David J.; Giembycz, Mark A.
CORPORATE SOURCE: Department of Thoracic Medicine, National Heart & Lung
Institute, Imperial College School of Medicine,
London, SW3 6LY, UK
SOURCE: British Journal of Pharmacology (2001), 133(8),
1201-1212
CODEN: BJPCBM; ISSN: 0007-1188
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 1 The spasmolytic and anti-spasmogenic activity of β-adrenoceptor
agonists on airways smooth muscle is thought to involve activation of the
cAMP/cAMP-dependent protein kinase (PKA) cascade. Here we have tested the

hypothesis that PKA mediates the anti-spasmogenic activity of isoprenaline and other cAMP-elevating agents in guinea-pig isolated trachea by utilizing a number of cell permeant cAMP analogs that act as competitive "antagonists" of PKA. 2 Anion-exchange chromatog. of guinea-pig tracheae resolved two peaks of PKA activity that corresponded to the type I (.apprx.5%) and type II (.apprx.93%) isoenzymes. 3 Pre-treatment of tracheae with zardaverine (30 μ M), vasoactive intestinal peptide (VIP) (1 μ M) and the non-selective activator of PKA, Sp-8-CPT-cAMPS (10 μ M), produced a non-parallel right-wards shift in the concentration-response curves that described acetylcholine (ACh)-induced tension generation. The type II-selective PKA inhibitor, Rp-8-CPT-cAMPS (300 μ M), abolished this effect. 4 Pre-treatment of tracheae with Sp-8-Br-PET-cGMPS (30 μ M) produced a non-parallel right-wards shift of the concentration-response curves that described ACh-induced tension generation. The selective cGMP-dependent protein kinase (PKG) inhibitor, Rp-8-pCPT-cGMPS (300 μ M), abolished this effect. 5 Pre-treatment of tracheae with isoprenaline (1 μ M) produced a 10 fold shift to the right of the ACh concentration-response curve by a mechanism that was unaffected by

Rp-8-Br-cAMPS

(300 μ M, selective inhibitor of type I PKA), Rp-8-CPT-cAMPS (300 μ M) and Rp-8-pCPT-cGMPS (300 μ M). 6 We conclude that the anti-spasmogenic activity of Sp-8-CPT-cAMPS, zardaverine and VIP in guinea-pig trachea is attributable to activation of the cAMP/PKA cascade whereas isoprenaline suppresses ACh-induced contractions by a mechanism(s) that is independent of PKA and PKG.

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:719272 CAPLUS

DOCUMENT NUMBER: 130:490

TITLE: Use of compounds inhibiting cAMP-dependent protein kinase A as immunomodulating agents for treating immunosuppressive diseases

INVENTOR(S): Tasken, Kjetil; Aandahl, Einar Martin; Aukrust, Pal; Skalhegg, Bjorn S.; Muller, Fredrik; Froland, Stig; Hansson, Vidar

PATENT ASSIGNEE(S): Norway

SOURCE: PCT Int. Appl., 56 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 9848809 | A1 | 19981105 | WO 1998-NO134 | 19980429 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| CA 2288215 | AA | 19981105 | CA 1998-2288215 | 19980429 |
| AU 9870865 | A1 | 19981124 | AU 1998-70865 | 19980429 |
| AU 738674 | B2 | 20010920 | | |
| EP 1024809 | A1 | 20000809 | EP 1998-917808 | 19980429 |
| EP 1024809 | B1 | 20020306 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| JP 2002501499 | T2 | 20020115 | JP 1998-546856 | 19980429 |
| NZ 501181 | A | 20020301 | NZ 1998-501181 | 19980429 |

| | | | | |
|------------------------|----|----------|----------------|------------|
| AT 213944 | E | 20020315 | AT 1998-917808 | 19980429 |
| PT 1024809 | T | 20020731 | PT 1998-917808 | 19980429 |
| ES 2171018 | T3 | 20020816 | ES 1998-917808 | 19980429 |
| NO 9905269 | A | 19991213 | NO 1999-5269 | 19991028 |
| PRIORITY APPLN. INFO.: | | | NO 1997-1997 | A 19970429 |
| | | | WO 1998-NO134 | W 19980429 |

AB Several compds. capable of inhibiting cAMP-dependent protein kinase A (PKA) are used to produce a medicament increasing T-cell proliferation in patients with immunosuppressive diseases. Inhibitors include cAMP analogs, ribozymes, antisense DNA, and peptides binding to the anchoring region of PKA. In T-cells from normal blood donors, TCR/CD3-stimulated T-cell proliferation was inhibited by a cAMP agonist (Sp-8-Br-cAMPS). This effect was almost completely reversed by increasing concns. of complementary antagonist (Rp-8-Br-cAMPS (I)). However, antagonist alone did not alter proliferation of normal T-cells. In contrast, when the TCR/CD3-induced proliferation of T-cells from a HIV-infected patient was investigated, I not only reversed the effect of the complementary agonist, but further increased the proliferation above the levels in untreated cells. When the effect of the antagonist alone was assessed in T-cells from HIV-infected patients, there was a concentration-dependent increase in TCR/CD3-induced proliferation that was more than 2-fold at higher concns. T-cells responding poorly to TCR/CD3 stimulation benefitted most from cAMP antagonist treatment.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:101527 CAPLUS

DOCUMENT NUMBER: 124:223905

TITLE: Antagonists of cyclic nucleotide-gated channels and molecular mapping of their site of action

AUTHOR(S): Kramer, Richard H.; Tibbs, Gareth R.

CORPORATE SOURCE: Dep. Molecular Cellular Pharmacology, Univ. Miami School Medicine, Miami, FL, 33101, USA

SOURCE: Journal of Neuroscience (1996), 16(4), 1285-93

CODEN: JNRSDS; ISSN: 0270-6474

PUBLISHER: Society for Neuroscience

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Activation of photoreceptor and olfactory cyclic nucleotide-gated (CNG) channels involves distinct ligand-binding and channel-gating reactions. To dissociate binding from gating, the authors identified the first competitive antagonists of CNG channels: specific phosphorothioate derivs. of cAMP and cGMP. The authors also identified membrane-permeant forms of these mols. that are antagonists and that will be useful for elucidating physiol. roles for CNG channels in intact cells. The photoreceptor and olfactory CNG channels determine which of the phosphorothioate derivs. are agonists and which are antagonists based on different structural features of the ligand. The photoreceptor channel uses the nature of the purine ring (adenine vs. guanine), whereas the olfactory channel uses the isomeric position of the thiophosphate S atom (Rp vs. Sp). Interestingly, the same ligand, Rp-cGMPS, has opposite effects on the two channels, activating the photoreceptor channel and antagonizing the olfactory channel. Because Rp-cGMPS binds to both channels but activates only one, the channels must differ in a protein region that couples binding to gating. Chimeric photoreceptor and olfactory CNG channels reveal that the cytoplasmic C-terminal domain dets. whether bound ligand activates the channel successfully. Hence, the C terminus contains not only the cyclic nucleotide-binding site, but also a region that couples ligand binding to channel gating.

L18 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:787966 CAPLUS

DOCUMENT NUMBER: 123:282000

TITLE: Novel (Rp)-cAMPS analogs as tools for inhibition of

AUTHOR(S) : cAMP-kinase in cell culture. Basal cAMP-kinase activity modulates interleukin-1 β action
Gjertsen, Bjoern T.; Mellgren, Gunnar; Otten, Anne;
Maronde, Erik; Genieser, Hans-G.; Jastorff, Bernd;
Vintermyr, Olav K.; McKnight, G. Stanley; Doeskeland,
Stein O.

CORPORATE SOURCE: Dep. Anat. Cell Biol., Univ. Bergen, Bergen, N-5009,
Norway

SOURCE: Journal of Biological Chemistry (1995), 270(35),
20599-607

CODEN: JBCHA3; ISSN: 0021-9258

PUBLISHER: American Society for Biochemistry and Molecular Biology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Novel (Rp)-cAMPS analogs differed widely in ability to antagonize cAMP activation of pure cAMP-dependent protein kinase I and II and to antagonize actions of cAMP on gene expression, shape change, apoptosis, DNA replication, and protein phosphorylation in intact cells. These differences were related to different abilities of the analogs to stabilize the holoenzyme form relative to the dissociated form of cAMP kinase type I and II. (Rp)-8-Br-cAMPS and (Rp)-8-Cl-cAMPS were the most potent cAMP antagonists for isolated type I kinase and for cells expressing mostly type I kinase, like IPC-81 leukemia cells, fibroblasts transfected with type I regulatory subunit (RI), and primary hepatocytes. It is proposed that (Rp)-8-Br-cAMPS or (Rp)-8-Cl-cAMPS should replace (Rp)-cAMPS as the first line cAMP antagonist, particularly for studies in cells expressing predominantly type I kinase. The phosphorylation of endogenous hepatocyte proteins was affected oppositely by (Rp)-8-Br-cAMPS and increased cAMP, indicating that (Rp)-8-Br-cAMPS inhibited basal cAMP-kinase activity. The inhibition of basal kinase activity was accompanied by enhanced DNA replication, an effect which could be reproduced by microinjected mutant cAMP-subresponsive RI. It is concluded that the basal cAMP-kinase activity exerts a tonic inhibition of hepatocyte replication. (Rp)-8-Br-cAMPS and microinjected RI also desensitized hepatocytes toward inhibition of DNA synthesis by interleukin-1 β . This indicates that basal cAMP-kinase activity can have a permissive role for the action of another (interleukin-1 β) signaling pathway.

L18 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:547947 CAPLUS
DOCUMENT NUMBER: 113:147947
TITLE: Probing the cyclic nucleotide binding sites of cAMP-dependent protein kinases I and II with analogs of adenosine 3',5'-cyclic phosphorothioates

AUTHOR(S) : Dostmann, Wolfgang R. G.; Taylor, Susan S.; Genieser, Hans Gottfried; Jastorff, Bernd; Doeskeland, Stein Ove; Oegreid, Dagfinn

CORPORATE SOURCE: Dep. Chem., Univ. California, San Diego, La Jolla, CA, 92093, USA

SOURCE: Journal of Biological Chemistry (1990), 265(18), 10484-91

CODEN: JBCHA3; ISSN: 0021-9258

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A set of cAMP analogs were synthesized that combined exocyclic S substitutions in the equatorial (Rp) or the axial (Sp) position of the cyclophosphate ring with modifications in the adenine base of cAMP. The potency of these compds. to inhibit the binding of [3H]cAMP to sites A and B from type I (rabbit skeletal muscle) and type II (bovine myocardium) cAMP-dependent protein kinase was determined quant. On the average, the Sp isomers had a 5-fold lower affinity for site A and a 30-fold lower affinity for site B of isoenzyme I than their cyclophosphate homolog. The mean reduction

in affinities for the equivalent sites of isoenzyme II were 20- and 4-fold, resp. The Rp isomers showed a decrease in affinity of .apprx.400- and .apprx.200-fold for sites A and B, resp., of isoenzyme I, against 200- and 45-fold for sites A and B of isoenzyme II. The Sp substitutions therefore increased the relative preference for site A of isoenzyme I and site B of isoenzyme II. The Rp substitutions, on the other hand, increased the relative preference for site B of both isoenzymes. These data showed that the Rp and Sp substitutions are tolerated differently by the 2 intrachain sites of isoenzymes I and II. They also support the hypothesis that it is the axial, and not the previously proposed equatorial O atom that contributes the neg. charge for the ionic interaction with an invariant arginine in all 4 binding sites. In addition, they demonstrate that combined modifications in the adenine ring and the cyclic phosphate ring of cAMP can enhance the ability to discriminate between site A and B of 1 isoenzyme as well as to discriminate between isoenzyme I and II. Since Rp analogs of cAMP are known to inhibit activation of cAMP-dependent protein kinases, the findings of the present study have implications for the synthesis of analogs having a very high selectivity for isoenzyme I or II.

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|--|------------------|---------------|
| FULL ESTIMATED COST | 17.06 | 370.74 |
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| CA SUBSCRIBER PRICE | -4.20 | -4.20 |

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